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Tentative First Steps

An Assessment of the Uruguay Round Agreement on Services

Bernard Hoekman

The General Agreement on Trade in Services (GATS) is a landmark in creating multilateral disciplines in virgin territory: international transactions in services. Hoekman asks: What does it do to bind policies? And has it established a mechanism to induce significant liberalization through future rounds of negotiations? The GATS scores high on neither point.

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Summary findings

A major result of the Uruguay Round was the creation of a General Agreement on Trade in Services (GATS). The GATS greatly extends coverage of the multilateral trading system, establishing rules and disciplines on policies affecting access to service markets.

In this paper Hoekman asks: What does the GATS do to *bind* policies? And has it established a mechanism likely to induce significant liberalization through future rounds of negotiations?

The GATS consists of two elements:

- A set of *general* concepts, principles, and rules that apply across the board to measures affecting trade in services, and
- *Specific* commitments on national treatment and market access. These apply only to service activities listed in a member's schedule — reflecting the agreement's "positive-list" approach to determining coverage — and only to the extent that sector-specific or cross-sectoral qualifications or conditions are not maintained.

The impact of the GATS depends largely on the specific commitments made by members, and sectoral coverage is far from universal. High-income countries scheduled about half of their service sectors; developing countries as a group (including Eastern European countries in transition) scheduled only 11 percent. And the sectors scheduled often continue to be subject to measures that violate national treatment or limit market access. High-income countries scheduled only 28 percent of the universe of services without exceptions to national treatment or market access obligations. For developing countries, that figure is only 6.5 percent. Much remains to be done.

The GATS's weaknesses include:

- A *lack of transparency*. No information is generated on sectors, subsectors, and activities in which no commitments are scheduled — most often the sensitive areas where restrictions and discriminatory practices abound.
- The *sector-specificity of liberalization commitments*. Negotiations were driven by the concerns of major players of each industry, leading to an emphasis on "absolute" sectoral reciprocity, limiting the scope for incremental liberalization, tradeoffs across issues, and an economywide perspective.
- The *limited number of generic rules*. Rather than lock in liberal situations that exist, the GATS allows for the future imposition of restrictions (creating "negotiating chips"). To foster nondiscriminatory liberalization, sectoral agreements should be firmly imbedded in a framework of *general* rules and disciplines. Many of the framework's general principles apply only if specific commitments have been made. Therefore they are not general.

Proposals for improving the GATS should probably build on the existing structure as much as possible. Possibilities include the following:

- Ultimately, apply the same rules to goods and services. Eliminate the artificial distinction between the two.
- Adopt a negative-list approach to scheduling commitments for the sake of transparency.
- Eliminate overlap between national treatment and market access.
- Develop generic, "horizontal" disciplines for the different modes of supply through which service markets may be contested.
- Explore the possibility of converting quota-like market access restrictions to price-based equivalent measures, thus ensuring that the most-favored-nation and national treatment principles are satisfied.
- Make framework disciplines general by eliminating all instances in which rules are conditional on the scheduling of specific commitments.
- Agree to a formula-based approach for liberalizing and expanding the GATS's sectoral coverage in future negotiations.

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Tentative First Steps:
An Assessment of the Uruguay Round Agreement on Services*

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Summary

One of the major results of the Uruguay Round was the creation of a General Agreement on Trade in Services (GATS). The GATS establishes rules and disciplines on policies affecting access to service markets, greatly extending the coverage of the multilateral trading system. In some respects it is a landmark achievement. In other respects it can be considered to be a failure. It is a landmark in terms of creating a multilateral disciplines in virgin territory; a failure in terms of generating liberalization. Commitments made in the Uruguay round on services are best described as bound standstill agreements for policies pertaining to specific sectors. Abstracting from ongoing talks on financial services, liberalization awaits future rounds of negotiations. This suggests there are two key issues that must be addressed in evaluating the GATS. First, what does it do to *bind* current policies? Second, has it established a mechanism that is likely to induce significant liberalization in the future? The primary objective of this paper is to provide answers to these questions.

The GATS consists of two main elements: (i) a set of *general* concepts, principles and rules that apply across the board to measures affecting trade in services; and (ii) *specific* commitments on national treatment and market access. The latter apply only to service activities that are listed in a Member's schedule--reflecting the so-called positive list approach that was taken to determine the coverage of the Agreement--and then only to the extent that sector-specific or cross-sectoral qualifications or conditions are not maintained. To a very large extent the impact of the GATS depends on the specific commitments that are made by Members. An analysis of the commitments made by Members reveals that the sectoral coverage of specific commitments is far from universal. High-income countries scheduled about 50 percent of their service sectors; developing countries as a group (including the Eastern European economies in transition) only 11 percent. In many cases such scheduled sectors continue to be subject to measures that violate national treatment or limit market access. Only 28 percent of the universe of services was scheduled by high-income countries without listing any exceptions to national treatment or market access obligations. For developing countries as a group the figure is 6.5 percent. Much remains to be done.

The GATS has a number of weaknesses, including a lack of *transparency*, the *sector-specificity of liberalization commitments*, and the *limited number of generic rules*. The GATS does not do anything near enough to ensure *transparency*. No information is generated on sectors, sub-sectors and activities in which no commitments are scheduled--most often the sensitive ones where restrictions and discriminatory practices abound. This is a serious shortcoming given the nature of impediments to trade in services (i.e. regulatory barriers at both the national and sub-national levels). Negotiations in the services area were (and will be) *sectoral*, driven very much by the concerns and interests of the major players in each industry. This has led to an emphasis on achieving 'absolute' sectoral reciprocity, limiting the scope for incremental liberalization, cross-issue tradeoffs, and an economy-wide perspective. Specific commitments for sectors distinguish four modes of supply--cross border, through establishment (commercial presence), involving consumer movement, or via the temporary presence of foreign providers. Allowing for modes of supply distinctions may distort resource allocation by creating the opportunity for biasing incentives towards a particular mode of supply. Thus, commitments of developing countries under the commercial presence mode of supply tend to be the least restrictive. Firms therefore may be given an incentive to engage in 'tariff-hopping' type investment. Another potentially perverse incentive created by the combination of specific commitments and the positive list approach to coverage is that Members may be induced to adopt policies that are in principle prohibited, and then seek to negotiate these away over time. Rather than locking-in a liberal situation if it exists, the GATS allows for the future imposition of restrictions (creation of 'negotiating chips'). To foster nondiscriminatory liberalization, sectoral

agreements should be firmly embedded in a framework of *general* rules and disciplines. Currently, many of the framework's general principles apply only if specific commitments have been made. They are therefore not general.

The implications for developing countries of the GATS are limited. The GATS imposes few limitations on national policy, only requiring that no discrimination across alternative sources of supply occurs. Many developing countries have been able to accede to the GATS with only minimal specific commitments. The non-generality of national treatment, and the sector-specificity of market access commitments reduces the value of the GATS to governments seeking to liberalize. Lobbies that oppose liberalization cannot be told that GATS membership implies national treatment for all sectors. Instead, it must explicitly list each and every sector to ensure that national treatment and market access obligations will apply. This clearly makes matters much more difficult for governments that 'need' an external justification for resisting protectionist pressures.

There are many challenges that need to be addressed by negotiators if the GATS is to become an effective and therefore *credible* instrument of multilateral liberalization. The sectoral coverage of the GATS must be greatly expanded through binding of all measures violating national treatment/market access. The set of generally applicable rules and disciplines must grow significantly, and the weight of the specific commitments reduced. The approach taken towards scheduling commitments in the Uruguay round needs to be critically assessed to determine whether it will be conducive to achieving significant liberalization of service markets in the future.

Realism suggests that proposals for improving GATS build upon the existing structure as much as possible. Much can be done if the willingness to do so is there. Possibilities include the following: (1) adopt a negative list approach to scheduling for transparency purposes--i.e., agree that all sectors are covered in principle, but allow for Members to list exceptions--with a transition period that gives Members sufficient time to do this; (2) eliminate all overlap between national treatment and market access, ensuring that the latter applies only to non-discriminatory measures; (3) seek to agree to horizontal disciplines on modes of supply, and eliminate mode-of-supply-specific limitations in the schedules; (4) expand the reach of the market access article by including the term "or measures with equivalent effect"; (5) convert quota-like market access restrictions to price-based equivalent measures by auctioning them off, thus ensuring that the most-favored-nation and national treatment principles are satisfied; (6) make all framework disciplines generally applicable by eliminating all instances where rules are currently conditional upon the scheduling of specific commitments; and (7) agree to a formula-based approach for future liberalization and expansion of the sectoral coverage of the GATS. GATT experience suggests that progress in trade negotiations is facilitated if negotiators use a quantifiable focal point. A 'formula' approach could help negotiations to make progress. A target could be established for the share of each Member's service sector that should be scheduled with 'no restrictions' and for the share of the GNS list that should be bound (scheduled).

More generally it must be recognized that the problems involved in 'fixing' the GATS extend beyond services. Future multilateral efforts must center on eliminating the artificial goods-services distinction, and develop generic disciplines on foreign direct investment (establishment) and labor movement. It will be important that attention is devoted to *both* goods and services in this connection, and that the same rules apply to goods and services.

I. Introduction

One of the major results of the Uruguay Round was the creation of a General Agreement on Trade in Services (GATS). The GATS establishes rules and disciplines on policies affecting access to service markets, greatly extending the coverage of the multilateral trading system. In some respects it is a landmark achievement. In other respects it can be considered to be a failure. It is a landmark in terms of creating a multilateral disciplines in virgin territory; a failure in terms of generating liberalization. Commitments made in the Uruguay round on services are best described as bound standstill agreements for policies pertaining to specific sectors. Abstracting from ongoing talks on financial services, liberalization awaits future rounds of negotiations. This suggests there are two key issues that must be addressed in evaluating the GATS. First, what does it do to *bind* current policies? Second, has it established a mechanism that is likely to induce significant liberalization in the future? The primary objective of this paper is to provide answers to these questions.

The paper starts in Section II with a brief overview of global trade flows in services and a discussion of the implications of the lack of information on trade barriers for multilateral negotiations. Section III provides a summary of the main elements of the GATS. Section IV analyzes the sectoral coverage of the commitments made by the 96 Members that had presented their services schedules to the GATT Secretariat as of mid-1994.[1] Section V discusses possible implications of the scheduling approach that was chosen, and asks whether future negotiations in the GATS context are likely to lead towards a fully nondiscriminatory trade regime (as opposed to managed trade). Section VI turns to options for addressing the architectural weaknesses of the GATS. Section VII concludes.

II. Trade Flows, Market Access Barriers, and Data Issues

Driven by innovations in information technology, increasing specialization and product differentiation, as well as government policies such as deregulation and liberalization, trade in services grew faster than trade in merchandise throughout the last decade. As shown in Table 1, in 1992 global services trade (non-factor services in the balance of payments minus government transactions plus labor income) stood at some US $930 billion. This was equal to 22.7 percent of global trade (goods plus services), as compared to 18.8 percent in 1980. Such trade occurs across borders (i.e, via telecommunications media), via physical movement of consumers to the location of service providers (e.g., tourism), or via temporary entry of service providers into the territory of a consumer (e.g., consulting). The average annual growth rate of services trade over the last decade was 8.3 percent. Both industrialized and developing countries have seen the relative importance of trade in services increase, although services account for a larger share of the total trade of OECD countries. In 1992, OECD countries accounted for 82 percent of global exports of commercial services, up from 79 percent in 1982.

[1] The term Member is used to denote that signatories of the GATS are members of an international organization, the WTO, and not simply contracting parties to a treaty, and because signatories are not always countries.

Table 1: Global Trade Flows, 1980 and 1992 (US $ billion and percentage)

	1980	1992	Average annual change
Total trade in services	358	931	8.3
OECD (shares in parentheses)	283 (79%)	765 (82%)	8.6
Rest of world	75 (21%)	166 (18%)	6.8
Services as share of goods *and* services	17.0	22.0	2.2
OECD	18.8	22.7	1.6
Rest of world	12.7	19.2	3.5

Source: World Bank. Data pertain only to countries reporting to the IMF.

Many services are not tradable, in the sense that cross-border, 'long-distance' exchange or temporary physical movement of provider/consumer does not suffice for an exchange to be feasible (Bhagwati, 1984). Producers of such services can contest foreign markets only through establishing a long-term physical presence in these markets, i.e., engage in foreign direct investment (FDI). Not surprisingly, FDI in services accounts for a large share of the total stock of inward FDI in most host countries. As of the early 1990s, some 50 percent of the global *stock* of FDI was in services activities. The share of annual flows to many countries has been over 60 percent in recent years.[2] The relative importance of *trade* in services (as registered in the balance of payments of a country) as opposed to *sales* of services by affiliates is not known. Conventional wisdom holds that FDI is likely to be the dominant 'mode of supply' for many services, but that this dominance is being eroded by technological developments. U.S. data, the only country that currently collects detailed data on both its trade in services and sales of services by affiliates of U.S. parent companies, suggest that trade and sales are of roughly the same importance.[3] Not too much can be inferred from this, however, as both trade and sales via FDI will in part reflect the barriers to the various modes of supply that are imposed by partner countries. Quantitative measures of these barriers currently do not exist (see below).

Available data on trade in services are very weak compared to those on merchandise (see Box 1). Only a limited number of industrialized countries collect and report statistics on trade in services at a relatively disaggregated level (e.g., ten categories or more). Most non-OECD countries only report data on trade in "commercial services" broken down into "transport" (largely freight and passenger transport by sea and air), "travel" (expenditures by nonresidents - mostly tourists - while staying in a

[2] See UNCTAD and World Bank (1994) for data on FDI in services.

[3] In 1987 foreign sales by U.S. majority owned affiliates were 15 percent smaller than service exports; in 1992 they had grown to be 20 percent larger (World Bank, 1995).

foreign country),[4] and "other services." The last category includes items such as brokerage, insurance, communications, leasing and rental of equipment, technical and professional services, income generated by the temporary movement of labor, as well as property income (royalties).

Box 1: Services Data Needs and Weaknesses

The main source of data on trade in services are the balance of payments (BOP). They have many weaknesses:

<u>Consistency and Coverage</u> - A user of BOP statistics cannot be certain that what is reported, for example, for exports of port services by country A consists of the same items as reported exports of port services by country B. Moreover, at virtually any level of aggregation, some nations may not report information on a certain item. Examples include maritime shipment exports and air transport services, as well as many types of business and professional services. This results in biased figures when data are added across countries to arrive at regional totals, and discrepancies when comparing world imports and exports for a category.

<u>Trade by Origin and Destination</u> - This information is not available on a comparable and detailed basis. Some countries report information on the direction of trade by geographic region or by major trading partner, but most countries do not do this.

<u>Disaggregation</u> - The amount of detail or disaggregation for data on trade in services is very limited.

<u>Trade data on a volume basis</u> - BOP data on services trade is only available on a value basis. The lack of volume and quality adjusted data makes it very difficult to determine what proportion of growth in a category in a given year is due to inflation as opposed to improvements in quality.

<u>Comparability across time</u> - When comparing developments in trade in services over time at both the country and the global level, another problem is that methodologies and definitions employed by countries may vary between different years. Often, countries may have improved the sectoral coverage of their data collection efforts at some point in time, making it difficult to determine to what extent an increase in recorded trade in services for a specific time period is "real," as opposed to being due to improvements in data collection.

<u>Concordances</u> - It is quite difficult--if not impossible--to relate service trade statistics to domestic production and employment data. To some extent this is because different countries include different items in various components of the current account. More important is that trade data are simply too aggregated, so that concordances have little meaning. Even if disaggregated trade data existed that were consistent across countries, trade statistics include items that do not appear in the national accounts. An example is expenditure by travellers.

<u>Data on sales by foreign affiliates</u> - BOP conventions imply that if factors of production move to another country for a period longer than one year, a change in residency status is considered to have occurred. The output generated by such factors that is sold in the host market will no longer be registered as trade in the BOP. Data on the magnitude of sales by affiliates and natural persons that have established in a foreign host country are rarely collected. The U.S. is a notable exception.

For more detailed discussions of the shortcomings of services data, see Hoekman and Stern (1991).

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[4] Note that part of tourist expenditures will be on goods (e.g., souvenirs or artifacts).

Table 2 provides an overview of the relative importance of these three main categories of trade for major country groups. Industrialized countries dominate global exports in all three categories. In relative terms developing countries have the greatest export share for 'travel' (i.e., tourism) with 17 percent of total exports.

Table 2: Shares in Global Service Exports and Relative Specialization, 1980 and 1992

Country group	Travel		Transport		All Other	
	1980	1992	1980	1992	1980	1992
Share in global trade:						
OECD members	71.6	77.9	78.4	81.8	80.2	84.6
Developing countries	21.8	17.3	16.5	12.5	15.3	11.7
Relative specialization:						
OECD members	1.01	0.96	1.10	1.02	1.13	1.06
Developing countries	0.93	1.12	0.65	0.82	0.65	0.74
Small LDCs (1 million people or less)	2.19	3.45	1.19	1.85	0.39	1.11

Although in aggregate value terms global trade in services is dominated by the OECD, this does not imply that developing countries have little interest in services trade. To the contrary, many developing countries are relatively specialized in exporting services. Table 2 also provides some data on revealed comparative advantage (RCA) indices for selected country groups.[5] Small countries (defined as those with less than one million people) are the most specialized in exports of services. Moreover, their relative specialization increased significantly during the last decade. These countries have higher than average export intensities for all three services categories, but are clearly most highly specialized in travel, that is, tourism. The relative importance of travel receipts was about twice the world average in 1980, rising to over three times in 1992.

Cross-country data on the magnitude of barriers to trade in services do not exist. Because services are generally intangible and often nonstorable, barriers to trade do not take the form of import tariffs. Instead, trade barriers take the form of prohibitions, quantitative restrictions (QRs), and government regulation. QRs may limit the quantity and/or value of imports of specific products for a

[5] These are defined as the ratio of exports of a product category to a country's total exports of goods and services, divided by the same ratio for the world: RCA = $[X_{ij}/Y_j]/[X_{iw}/Y_w]$, where X_{ij} are exports of product i by country j, Y_j are total exports of goods and services by country j, and w stands for the "world:" the sum of all countries). The value of this index may range from zero to a very large number. If the index is greater than one this implies that the country is relatively specialized in the product concerned.

given time period; or restrict the number and/or market share of foreign service providers allowed to establish. Such discriminatory QRs are often complemented by measures that apply to both foreign *and* domestic service providers. These usually consist of limitations on the number of firms allowed to contest a market, or on the nature of their operations. Frequently, this involves either a monopoly (e.g. basic telecommunications services) or oligopolistic market structures (e.g. banking or self-regulating professional services). Often such market structures are tolerated because of the asymmetric information problems that are inherent in many service exchanges -- services frequently being experience or credence goods. Considerations relating to consumer protection, prudential supervision and regulatory oversight often induce governments to *require* establishment by foreign providers (e.g. financial or professional services), or reserve activities for government-owned or controlled/regulated entities.

The nonexistence tariffs as a restraint to trade greatly complicates the life of those seeking to analyze or to negotiate incremental reductions in barriers to services trade. In terms of analysis, what is required is the estimation of the tariff-equivalent of a given set of measures and regulations pertaining to a service activity/sector. Very little work has been done in this connection.[6] Negotiators require a focal point--some tangible variable enabling parties to set objectives, evaluate the position of others, and assess negotiating progress. In past merchandise trade negotiations, the focus of negotiators centered on the value of bilateral trade flows and the matching vector of applied tariffs. This focal point is a measure that takes into account the relative size of different countries (trade volume) and is simple to calculate. The complexities associated with identifying and quantifying barriers to trade in services focused the attention of negotiators on *rules*. Thus, a substantial amount of time and resources was devoted to determining whether and how GATT-like concepts such as national treatment and MFN could be applied to service sectors. Indeed, discussions rapidly became sector-specific. But rather than focusing on the identification, quantification and reduction of barriers, absolute sectoral reciprocity became the norm. This contrasts with the 'first-difference' approach to reciprocity used in GATT tariff negotiations (Bhagwati, 1988).[7]

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[6] As discussed in greater detail in Hoekman (1994), research has focused primarily on theoretical issues, not on empirical analyses. While perhaps not surprising, given the difficulties involved in generating data on barriers to trade, this has meant that negotiators have had little in the way of guidance regarding the costs and benefits of alternative negotiating strategies/policy stances. It is beyond the scope of this paper to discuss the myriad issues that complicate estimation of 'tariff equivalents' or price-cost margins in the services context. In addition to 'standard' problems that arise in modeling the effect of nontariff measures (see, e.g., Deardorff and Stern, 1985), account needs to be taken of nondiscriminatory market access restrictions; the importance of natural barriers to trade (distance, language, climate, etc.); the fact that establishment is often *required*; complementarities between modes of supply; prevalence of joint production (e.g., the need for consumer/provider to cooperate); and the role of reputation and non-price competition in many service industries. See, e.g., Hindley (1988), Messerlin and Sauvant (1990), Sapir (1993), Sapir and Winter (1994) and UNCTAD and World Bank (1994).

[7] Space constraints prevent a summary of negotiating positions and issues. See e.g., Brock (1982), Bhagwati (1987a,b), Drake and Nicolaidis (1992), Feketekuty (1988), Giersch (1989), Grey (1985), Helleiner (1988), Hindley (1990), Richardson (1987), Sampson and Snape (1985), Sapir (1985), and Snape (1990).

III. A Synopsis of GATS Disciplines

The GATS consists of four main elements:[8] (i) a set of *general* concepts, principles and rules that apply across the board to measures affecting trade in services; (ii) *specific* commitments on national treatment and market access that apply to those service sectors and sub-sectors that are listed in a Member's schedule, subject to sector-specific or cross-sectoral qualifications or conditions (if any); (iii) an understanding that periodic negotiations will be undertaken to progressively liberalize trade is services; and (iv) a set of attachments that include annexes that take into account sectoral specificities and Ministerial Decisions that relate to the implementation of the GATS.

The GATS applies to *measures imposed by a Member to the Agreement that affect the consumption of services originating in other Members* (Article I). The Agreement applies to all four 'modes of supply': (i) cross-border supply of a service (i.e., not requiring the physical movement of supplier or consumer); (ii) provision involving movement of the consumer to the country of the supplier; (iii) services sold in the territory of a Member by (legal) entities that have established a commercial presence there but originate in the territory of another Member; and (iv) provision of services requiring the *temporary* movement of *natural* persons.[9] The Agreement does not apply to services supplied in the exercise of governmental functions.

MFN, national treatment, and market access

The core principle of the GATT is nondiscrimination, as reflected in its most-favored-nation (MFN) and national treatment rules. These rules apply generally in the GATT - i.e., to all trade flows - except insofar as explicit allowance is made for their violation (e.g., in the context of regional integration). MFN and national treatment are also key elements of the GATS. However, their reach is less all-encompassing in the GATS. The coverage of MFN for each GATS Member is subject to a *negative* list--it applies to all services *except* those listed by each Member. The coverage of national treatment is determined by a 'conditional' *positive* list approach--i.e., it only applies to sectors listed in a country's schedule, and then only insofar as existing measures are not exempted. In addition to the two central GATT-principles, the GATS introduces a commitment not found in the GATT: a market access obligation. Its reach is determined by a positive listing of sectors by each GATS Member.

Although MFN is a general obligation, the GATS contains an Annex allowing countries to invoke an exemption to MFN. MFN exemptions may only be made upon the entry into force of the agreement.

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[8] For the complete text of the GATS, see GATT (1994).

[9] This follows the typology suggested in the academic literature, especially Bhagwati (1984) and Sampson and Snape (1985). 'Trade in services' in the GATS context therefore covers both trade in the balance of payments sense and *local sales* by foreign affiliates.

Once a Member, further exemptions can only be sought by requesting the Ministerial Conference of the WTO for a waiver (which must be approved by three quarters of the Members). MFN exemptions are in principle to last no longer than ten years and are subject to negotiation in future trade liberalizing rounds, the first of which must take place within 5 years of the entry into force of the agreement. The need for an annex on MFN exceptions largely reflected a concern on the part of some industries that MFN allowed competitors located in countries with relatively restrictive policies to benefit from their sheltered markets while enjoying a 'free ride' in less restrictive export markets. This concern was expressed vividly in GATS discussions on financial services and telecommunications, prompting industry representatives in relatively 'open' countries to lobby for MFN exemptions as a way to force sectoral reciprocity.[10] In the closing days of the Uruguay Round it became clear that a number of participants were ready to invoke the Annex on MFN exceptions for financial services, basic telecommunications, maritime transport, and/or audio-visual services. Rather than allow a situation to develop where countries would withdraw already tabled commitments in these areas and/or exempt them from the MFN obligation, a compromise solution was reached under which negotiations on a number of these sectors were to continue without endangering the establishment of the GATS (and the WTO).

Negotiations on financial services, basic telecommunications and maritime transport were restarted in the spring of 1994. Of the three, only those on financial services are to be concluded rapidly: within six months of the entry into force of the WTO. If negotiations are not successful - i.e., the market access offers made by a certain countries are not satisfactory to other, demandeur, countries - Members are free to withdraw conditional offers in this area (invoke an MFN exemption). Negotiations on basic telecommunications and maritime transport are to be concluded by end-April and end-June 1996, respectively. Until then, both the MFN requirement and the possibility of invoking an exemption shall not enter into force for these services, except to the extent that a Member has made a specific commitment for a sector.

Over 60 GATS Members submitted MFN exemptions. Three sectors in particular are affected: audio-visual services, financial services, and transportation (road, air and maritime). Exemptions in the audio-visual area tend to be justified on the basis of cultural objectives, allowing for preferential co-production and/or distribution arrangements with a limited number of countries. Exemptions for financial services are usually motivated by reciprocity concerns: countries seeking the flexibility to retaliate against Members that do not offer reciprocal access to financial service markets. The goal of many Members in this connection appears to be to maintain some leverage vis-a-vis the United States.[11] Exemptions in

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[10] The issue here was mostly one of industries in relatively open markets seeking to obtain access to more closed markets. It was not that the demandeur industries feared 'cross-subsidized' competition. This implies that the carrot that is on offer--MFN--is unlikely to induce much pressure in countries being asked to open up to do so.

[11] Interestingly, the EU made an exemption for distribution of audiovisual works and audiovisual services more generally, allowing it to impose "redressive duties ... to respond to unfair pricing practices" by third country distributors, and to "prevent, correct or counterbalance adverse, unfair, or unreasonable conditions or actions

the transport area often are motivated by the UNCTAD Liner Code (a concern for many African countries in particular), or the existence of bilateral/regional agreements. The significance of the MFN exemptions should not be exaggerated. Audio-visual and transport services were always expected to be hard nuts to crack. A breakdown of the financial services talks should not have much of an impact on the GATS coverage as this is largely a bilateral affair, involving the U.S. on one side and Japan on the other (*Financial Times*, August 16, 1994).

It is noteworthy that many MFN exemptions concern existing regional integration agreements. As is the case under the GATT, the GATS makes explicit allowance for the violation of MFN through the formation of economic integration agreements involving Members, subject to three conditions. First, they must have "substantial sectoral coverage." Second, they must either eliminate existing discriminatory measures *and/or* prohibit the introduction of new ones. Third, the *overall* level of barriers to trade in services against other GATS members *within the respective sectors or sub-sectors* must not rise above the level previously applicable. There is no requirement that integration agreements be 'open' in principle to the accession of third countries.[12] As explored at some length in Hoekman and Sauvé (1994), these conditions are weaker than those applying in the GATT context. The second condition in particular is weak: a mere *standstill* agreement may be sufficient. The weakness of the disciplines on regional economic integration imply only a limited constraint on 'strategic' violations of the MFN obligation. Notwithstanding this, many countries felt the need to take MFN exemptions justified on the basis of existing regional integration agreements.

As mentioned earlier, market access and national treatment are so-called specific commitments. These obligations apply *only* to services that are included in the schedules of Members, and then only subject to whatever qualifications or conditions are listed. Six types of *market access restrictions* are in principle prohibited. These consist of limitations on: (i) the number of service suppliers allowed, (ii) the value of transactions or assets, (iii) the total quantity of service output, (iv) the number of natural persons that may be employed, (v) the type of legal entity through which a service supplier is permitted to supply a service (e.g., branches vs. subsidiaries for banking), and (vi) participation of foreign capital in terms of a maximum percentage limit of foreign shareholding or the absolute value of foreign investment. *National treatment* is defined as treatment no less favorable than that accorded to like domestic services and service providers. However, such treatment may or may not be identical to that applying to domestic firms, in recognition of the fact that identical treatment may actually worsen the conditions of competition for foreign-based firms (e.g. a requirement for insurance firms that reserves be held locally).

The introduction of a market access commitment reflects one of the distinguishing characteristics

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affecting EC audiovisual services, products, or service providers, in response to corresponding or comparable actions taken by other Members."

[12] In contrast to Article VII on Recognition (see below).

of service markets: the fact that their contestability is frequently restricted by non-discriminatory measures. The market access article explicitly covers six such measures that were felt to be of particular importance. However, the market access obligation overlaps with the national treatment requirement, as prohibited measures may be discriminatory as well as non-discriminatory. The overlap creates potential for confusion and disputes. Because national treatment and market access are not general obligations, in the GATS context the schedules of commitments of Members are very important in determining the extent of the market access opportunities resulting from the Agreement. As discussed further below, these schedules are constructed in such a manner that the liberalization 'dynamics' of the GATS may turn out to be substantially weaker than those of the GATT.

Other obligations and disciplines

Other obligations address issues such as transparency, recognition of licenses and certification, payments and transfers, domestic regulation and the behavior of public monopolies. Article III (Transparency) requires all Members to establish enquiry points to provide specific information concerning any laws, regulations, and administrative practices respecting services covered by the Agreement. Article VI (Domestic Regulation) requires that Members establish disciplines to ensure that qualification requirements, technical standards and licensing procedures are based on objective and transparent criteria, are no more burdensome than necessary to ensure the quality of the services concerned, and do not constitute a restriction on supply in themselves (thereby possibly circumventing a specific commitment). Article XI requires Members to refrain from applying restrictions on international transfers and payments for current transactions relating to their specific commitments. Article VII (Recognition) allows for the establishment of procedures for (mutual) recognition of licenses, education, and/or experience granted by a particular Member. It is noteworthy in *requiring* Members to "afford adequate opportunity" for other Members to negotiate their accession to an existing bilateral or plurilateral recognition agreement. Monopoly or oligopoly supply of services is allowed under the GATS, but Governments are required to ensure that such firms do not abuse their market power to 'nullify' any specific commitments relating to activities that fall *outside* the scope of their exclusive rights.

Many of the framework's rules and disciplines apply *only* to the extent specific commitments are made. This is a serious shortcoming, and is a consequence of the positive list approach taken for scheduling commitments. Clearly one would want--and expect--disciplines regarding payments and transfers to be general. To the extent that other parties are willing to allow a country to maintain restrictions, a negative list approach would have allowed for exemptions. But at least the principle would be *general*, not specific. Even worse is emphasis put in Article VI (Domestic Regulation) that the requirement that "all measures of *general application affecting trade in services* are administered in a reasonable, objective and impartial manner" applies only "in sectors where specific commitments are undertaken" (GATT, 1994, p. 333, emphasis added).

The MFN, national treatment and market access obligations of the GATS do not extend to government procurement of services. Negotiations on this issue are to be initiated within two years of the entry into force of the WTO.[13] This greatly reduces the coverage of the GATS as procurement typically represents a significant share of total demand for many services--e.g., professional services, consulting engineering, and construction. The GATS also does not impose general disciplines on subsidy practices, only subjecting subsidies to the Agreement's general obligations (i.e. transparency, MFN and dispute settlement). Negotiations are also called for on this topic, the time frame to be determined by a future work program. Article IX recognizes that business practices of service suppliers that have *not* been granted monopoly or exclusive rights may restrain competition and thus trade in services, but no obligations are imposed regarding the scope and enforcement of competition policy. Members are only obliged to supply publicly available non-confidential information of relevance to a competition-related matter if so requested by another Member.

There are a number of articles of a 'safeguard' nature, including Article X (Emergency Safeguard Measures), Article XII (Restrictions to Safeguard the Balance of Payments), Article XIV (Exceptions) and Article XXI (Modification of Schedules). Article X allowing for possible *industry-specific safeguard actions* is largely a shell, calling for further negotiations on the this topic within three years from the entry into force of the WTO. The *balance of payments provision* only applies to those services for which specific commitments have been undertaken. It requires that such measures be non-discriminatory, temporary, and phased out progressively as the invoking Member's balance of payments situation improves.[14] Article XIV on *exceptions* is similar to what is found in the GATT, providing Members with the legal cover to take measures to safeguard public morals, order, health, security, consumer protection and privacy. It also allows for measures that violate national treatment if used to ensure equitable or effective collection of direct taxes, or that violate MFN if resulting from a bilateral double taxation agreement.[15] The provision on *modification of schedules* allows 'concessions' (i.e., specific

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[13] The revised GATT Government Procurement Agreement was expanded to include services. However, this is a plurilateral agreement that binds only signatories. The new Agreement has 11 members, mostly OECD countries (Israel and Korea are the only non-OECD parties). Coverage of procurement of *services* is subject to a 'double' positive list: only the procurement by covered entities of services explicitly scheduled in Annexes are subject to the Agreement's rules, and then only insofar as no qualifications or limitations are maintained in the relevant Annexes. A number of countries made derogations to commitments on services specifying that offered services are covered only to the extent that other Parties to the Agreement provide reciprocal access to those services. The approach taken in the GATS regarding sectoral reciprocity was therefore also pursued in the procurement context.

[14] As in the GATT context, no recognition is expressed that import restrictions are second-best instruments to deal with balance of payments difficulties.

[15] A Ministerial Decision included in the Final Act states that "since measures necessary to protect the environment typically have as their objective the protection of human, animal, or plant life or health, it is not clear that there is a need to provide for .." an explicit 'environmental' exception. The Committee on Trade and Environment is given the tasks of determining whether there is such a need, and examining the relationship between trade in services and the environment.

commitments) to be withdrawn subject to negotiation and compensation. In the event that bilateral negotiations on compensation are unsuccessful, arbitration is foreseen. Retaliation will only be authorized in instances where a Member does not comply with arbitration. Finally, the WTO's Dispute Settlement Body will be responsible for GATS, as well as GATT and TRIPs. It is noteworthy in this regard that retaliation from goods to services and vice-versa is possible.

Developing country-specific provisions[16]

The GATS contains no provisions similar to Part IV of the GATT on more favorable treatment of developing countries (special and differential treatment), or to the (unilateral) arrangements for tariff preferences that exist for merchandise trade flows (e.g., the Generalized System of Preferences). Although Article XIX allows developing countries to offer fewer specific commitments than industrialized nations, this is not a right (or obligation). No developing country (including least developed ones) has been allowed to become a Member of the GATS without scheduling at least one service sector. Other provisions addressing developing country concerns include Articles IV (Increasing Participation of Developing Countries), III (Transparency), and XV (Subsidies). Article IV states that increasing the participation of developing countries in world trade in services is to be facilitated through *negotiated* specific commitments relating to: (1) access to technology on a *commercial* basis; (2) the improvement of access to distribution channels and information networks; and (3) the liberalization of market access in sectors of export interest to them. On transparency, industrialized nations are to establish contact points to facilitate the access of developing country service suppliers to information relating to (1) the commercial and technical aspects of specific services; (2) requirements for registration, recognition, and obtaining of professional qualifications; and (3) the availability of services technology.[17] Article XV recognizes the role of subsidies in development programs of developing countries.

IV. Specific Commitments under the GATS

The core of the GATS are the specific commitments. To a very large extent the impact of the GATS depends on the commitments that are made by Members. Negotiators chose to pursue a 'hybrid' of a positive and negative list approach to scheduling specific commitments. It is a positive list with respect to determining sectoral coverage of market access and national treatment commitments; a negative list with regard to the maintenance of measures that violate either national treatment or the market access disciplines. Each Member first decides (negotiates) which service sectors will be subject to the GATS market access and national treatment disciplines. It then decides (negotiates) what measures will be kept

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[16] For a more detailed discussion, see UNCTAD and World Bank (1994, pp. 144-46).

[17] This provision goes beyond the requirement to establish enquiry points contained in Article III (on transparency), as those simply relate to laws, regulations, decisions, etc. that affect the supply of services. The contact points for developing countries also cover technical matters.

in place *for that sector* that violate market access and/or national treatment, respectively. Such limitations and exceptions must be specified by mode of supply. As there are four modes of supply, there are therefore eight opportunities for GATS Members to avoid full application of market access/national treatment. In addition to the specific commitments, countries also make 'horizontal' commitments. These usually consist of a compilation of laws and policies that restrict the use of a mode of supply by foreign suppliers, independent of the sector involved. A policy that is often scheduled is an 'economic needs' test--laws or regulations stipulating that foreign service providers may contest a market only if domestic providers do not exist, or are unable to satisfy demand. Another example is a general licensing or approval requirement. In many instances such horizontal 'headnotes' simply involve a restriction on the inward movement of natural persons. Table 3 illustrates the format of the schedules. An entry of 'none' means a Member binds itself not to have any measures that violate a market access or national treatment for a specific sector/mode-of-supply combination; 'unbound' implies that no commitments are made for a particular mode of supply.[18]

Quantifying the specific commitments: conceptual issues

To assess the schedules, a quantitative measure is required that allows for cross-country comparisons. In principle this requires a mapping of schedules onto a scale that is invariant across countries. A first step could consist of determining the total value of output represented by a Member's scheduled sectors as a proportion of its GDP. If country A schedules only 5% of it's service sector in GDP terms, while country B schedules 15%, one can say that in an absolute sense B has offered three times as much as A. This requires the use of a common sectoral classification and output data that is consistent with this classification. The Group of Negotiations on Services (GNS) established a list of services. This list--reproduced in Annex 1--has been used by Members in scheduling commitments. It is based on the Central Product Classification (CPC), with the exception of communication and financial services, where a GNS-specific breakdown of activities was deemed necessary.

Unfortunately, no countries collect/report disaggregated data on the basis of the CPC, as it has only been developed recently. Many countries only report GDP data for 5-10 service sectors. Obtaining the requisite output data for all GATS Members, even for the 11 major service categories distinguished in the GNS list, is a major endeavor. It has not been undertaken in this paper. In part this is because to be meaningful, indicators of sectoral coverage must incorporate information on the restrictiveness of the measures that are maintained with respect to national treatment and/or market access. This is much more important--but also much more difficult--than determining the 'production weights'.

[18] Most Members do not list horizontal restrictions on cross-border supply or consumer movement. It is not clear whether this implies that they have bound themselves. It should also be mentioned that the GATS allows for 'additional commitments' to be made going beyond national treatment/market access. Virtually no use was made of this option, and it will be ignored in what follows.

Table 3: Format and Example of a Schedule of Specific Commitments

Commitments	Mode of supply	Conditions and limitations on market access	Conditions and qualifications on national treatment
Horizontal commitments (i.e., across all sectors)	Cross-border supply	'None'	E.g., 'None' other than tax measures that result in differences in treatment with respect to R&D services.
	Consumption abroad	'None'	'Unbound' for subsidies, tax incentives, and tax credits.
	Commercial presence (FDI)	E.g., 'Maximum foreign equity stake is 49 percent'	E.g., 'Unbound' for subsidies. Under Law x, approval is required for equity stakes over 25 percent; new investment that exceeds y million.
	Temporary entry of natural persons	E.g., 'Unbound except for the following: Intra-corporate transferees of executives and senior managers; specialist personnel for up to one year; specialist personnel subject to economic needs test for stays longer than one year; service sellers (sales people) for up to three months.	E.g., 'Unbound except for categories of natural persons referred to in the market access column
Specific commitment: E.g., 1.A.d. Architectural services	Cross-border supply	E.g., 'Commercial presence required'	E.g., 'Unbound'
	Consumption abroad	E.g., 'None'	E.g., 'None'
	Commercial presence (FDI)	E.g., '25 percent of senior management should be nationals'	E.g., 'Unbound'
	Temporary entry of natural persons	E.g., 'Unbound, except as indicated in Horizontal Commitments'	E.g., 'Unbound, except as indicated in Horizontal Commitments'

To be able to compare schedules, commitments listing measures violating national treatment and market access obligations must be 'discounted' in some way. In most cases no information exists regarding the restrictiveness of the policies that are maintained or the relative importance of modes of supply on a sector-by-sector basis, taking into account the complementarities that may exist between various modes. Some modes may be irrelevant because of technological factors. For example, offering zero restrictions on cross-border delivery or consumer movement in the context of retail banking services is of little value, as retail banking products usually require a commercial presence to be sold. A commercial presence in retail banking will in turn require some movement of personnel (management, technical support staff for data processing and information technology, etc.) If there are no limitations on commercial presence, but if there are restrictions on movement of the required personnel, market access may be severely limited. Similarly, there may be no limitations on movement of personnel, but restrictions on an activity (e.g., no deposit taking allowed). Establishing 'mode-of-supply' weights on a sector-by-sector basis is another monumental task.[19] A final problem concerns quantification of the restrictiveness of the horizontal commitments, which although applying to particular modes of supply across all sectors, will affect particular sectors differently.

No attempt is made here to determine the restrictiveness or change therein of the policies affecting either scheduled or non-scheduled services.[20] The focus is instead on scaling the sectoral commitments of GATS Members with a view to 'quantifying' two things: (1) the extent to which measures have been *bound*; and (2) the share of sectors where the binding relates to 'free trade'. Abstracting from the lack of information on the economic impact of measures applied to services, even a qualitative assessment of the liberalization implied by the specific commitments is not possible. Unfortunately, the schedules do not reveal to what extent they imply liberalization, if at all. It *appears* that virtually all commitments are of a standstill nature, i.e., consist of a binding of (part of) the status quo. This is the perception of negotiators, and in what follows this is assumed.[21] Given that liberalization in the sense of reducing discrimination and enhancing market access did not occur, the relevance of 'weighted' sectoral coverage indicators increases, as the key issue then is to determine the extent to which Members were willing to bind the status quo.

For purposes of evaluating the specific commitments, each GATS Member's specific commitments was entered into a spreadsheet. As there are 155 non-overlapping service sectors in the GNS classification list (see Annex 1) and four modes of supply, this implies 620 possible commitments. As commitments apply to national treatment and market access separately, there are 1,240 data cells for each Member. Schedules were submitted by 96 Members. Two country groups were created for comparison purposes, one for 78 'developing countries', and one for 18 high income countries ('HIC'). The latter includes OECD members, with the EU counted as one, Singapore, Hong Kong, and South Korea.[22] The 'developing country' group includes countries with a wide range of per capita incomes and substantial variation in service market size (GDP). Because of their relatively low per capita incomes this group includes a number of East European transition economies--the Czech Republic, Hungary, Poland, Romania, and the Slovak Republic. Annex 3 lists GATS Members that submitted schedules, defines the membership of the two groups, and reports the number of commitments by Member.

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[19] In what follows use is only made of a subjective weighing scheme to determine the possible impact of--sensitivity to--incorporating this into the analysis.

[20] The GATS schedules can be used to generate some information on the *relative* restrictiveness of the policy regimes maintained by Members. Annex 2 reports the results of calculations in this regard, which were used in Brown, Deardorff and Stern (1995).

[21] As mentioned earlier, the only area where liberalization may occur is in financial services, where discussions are to be concluded by the summer of 1995.

[22] The intention was to include countries that are, or are soon expected to be, OECD members.

Commitments were classified into three categories: (1) 'None', implying no restrictions are applied on *either* market access or national treatment for a given mode of supply/sector; (2) 'Unbound', meaning no policies are bound for a given mode of supply/sector; and (3) 'Other', which in practice implies that restrictions are listed for a mode of supply/sector. These limitations (policies) are *bound.* To allow calculation of the sectoral coverage of commitments, one of three numerical indicators (weights) was allocated to each of the 'cells' of a Member's schedule: a '1' in all instances where 'None' was stated in the schedule for a sector/mode of supply (i.e., full market access/national treatment is provided); a zero in all instances of where Member's list 'Unbound' for a sector/mode of supply; and 0.5 in all instances where specific restrictions or limitations are listed for a sector/mode of supply.[23] The value of these indicators were chosen so as to allow aggregation across sectors and countries. The higher the number, the greater the implied extent of openness-cum-binding.[24] Scaling commitments of 'unbound' as zero, and commitments implying maintenance of measures violating national treatment or market access as 0.5 reflects a perception that scheduling and binding has value, no matter how restrictive the policies that are maintained.

Tariff bindings (schedules) are very important for the functioning of the GATT because they establish a benchmark for the conditions of market access that a country commits itself to. Under GATT rules, any measure taken or supported by a government that has the effect of 'nullifying or impairing' the 'concession' implied by the tariff binding may give rise to a complaint to the GATT by a country that perceives the measure having this effect. That is, the binding not only restricts the possibility of raising tariffs, but also limits the possibility of using measures that have an equivalent effect. However, this constraint only bites if tariffs are bound at applied rates. In practice, many developing countries have

[23] If countries made commitments on sectors that are not individually mentioned in the GNS classification list (e.g., under Other Business Services) only one sector was recorded. The economic significance of the activities mentioned in such cases tend to be very minor. Members sometimes specify that a commitment applies only to a subset of a disaggregated GNS item. A common example is under legal services, where foreign providers are often limited to the practice of--advice on--home country law. In these cases it is assumed that the commitment applies to the whole subsector, biasing sectoral coverage indicators upward. Some GATS Members may schedule commitments for an aggregated item, e.g., Construction and Related Engineering Services instead of all five of the relevant sub-sectors. In these cases it has been assumed that the commitment applies to all of the respective sub-sectors. In a number of cases a mode of supply is technically not feasible. A good example is cross-border provision of building assembly and installation services. Most schedules note this fact, stating that the mode of supply is "unbound due to lack of technical feasibility." Such cases have been allocated the number '1' for coverage calculation purposes if other modes of supply are unrestricted. In the case of nations with a federal structure, a limitation on a mode of supply may only apply for one of the sub-federal entities (e.g., one or more states or provinces). No account of this has been taken in the calculations, i.e., it is assumed that the limitation applies to the whole nation. This results in a downward bias of coverage. Affected Members include Canada, the European Union and the U.S.

[24] A value of 1 for a sector/mode of supply does *not* necessarily imply that foreign service providers can freely contest a specific market through a given mode of supply. This depends on the applicable horizontal commitments. In all cases where a reference is made under the temporary entry mode of supply to a horizontal commitment (restriction), a value of 0.5 was entered.

bound their tariffs at levels that are substantially higher than currently applied rates. This greatly reduces the relevance of binding, but does not reduce their value to zero. Martin and Francois (1994) argue that a binding that is above the applied rate is valuable because it reduces the expected mean tariff.

Bindings in the services context are less powerful than tariff bindings under the GATT because the market access article captures only a subset of the universe of measures. Many market access barriers are not 'caught' by the scheduling exercise. Examples include labor legislation, tax regimes, restrictions on land availability, ownership or use, licensing and related fees, existence and reach of competition policies, regulation of monopolies, judicial enforceability of contracts, etc. Such measures/policies can satisfy national treatment, are not captured by the market access article, but can restrict the contestability of markets. Nonetheless, binding policies that violate national treatment or market access has value as new measures violating these commitments is no longer possible. Moreover, if a Member schedules a sector and later introduces policies that are not prohibited but have the effect of nullifying its specific commitments, it can be confronted with a nonviolation complaint. If the measure is determined by the Dispute Settlement Body to have nullified or impaired a specific commitment, the Member affected is entitled to compensation, and if agreement cannot be reached, to retaliation (Art. XXIII, GATS).

Sectoral shares can be used as an indicator of the 'openness' of countries if attention is limited to those sectors where GATS Members offer free market access and full national treatment, i.e., no limitations are maintained under the market access and national treatment columns. The sectoral coverage of such 'no restriction' commitments in the country schedules is perhaps the most obvious quantifiable focal point that was available to negotiators. It also lends itself to a formula-type approach. Negotiators might have agreed that all offers should include at least x percent of their service sector (weighted by output) for which no restrictions on market access or national treatment would be maintained. This would have provided a clear benchmark, and a minimum threshold against which offers could be compared across countries on an objective basis. Adoption of such a criterion would still have allowed countries a substantial amount of flexibility concerning the choice of the sectors to be included, but would have ensured that the 'minimum acceptable' offer was proportional to country size. In the event, 'quantitative targets' were not used in the scheduling exercise, leaving it to bilateral negotiations to determine what was the minimum acceptable level of participation. Thus, instead of pursuing a formula-based approach (used to good effect in later GATT tariff-cutting rounds and in the agricultural setting through the concept of reducing an aggregate measure of support), service negotiators resorted to the classic bid-offer approach to liberalization. More on this below.

Measures of sectoral coverage of specific commitments

Tables 4 through 8 report sectoral coverage indicators for 'HIC' members and developing countries. Market access (MA) and national treatment (NT) coverage ratios are reported in Table 4. For both MA and NT, three indicators were calculated. First, the number of sector/mode of supply combinations (cells) where a commitment was made. Second, the 'average coverage' of the schedule defined as the arithmetic mean of the scale factors allocated to each cell (0 for 'unbound', 0.5 for bound restrictions, and 1 for 'no restrictions'. Third, the share of 'no restriction' commitments in (1) a Members total commitments ('count'); and (2) relative to the 155 possible sectors of the GNS classification list. The higher the number, the more 'liberal' the country. These ratios are conceptually similar to NTB frequency and coverage indices.

'HIC' members made commitments of some kind for 53.3 percent of the GNS list, as compared to 15.1 percent for developing countries. Commitments made by large developing countries, arbitrarily defined as those with GDP of US $40 billion or more, were substantially higher than the developing country average, accounting for 29.6 percent of the GNS list. This largely reflects the fact that many developing countries made very limited commitments. Indeed, over one-quarter of developing countries scheduled less than 3 percent of the GNS list (i.e., 22 out of 78 countries). Four of these countries scheduled only one of the 155 service sectors identified on the GNS list; five others made commitments on only two subsectors. Countries in the 'developing country' group with the highest number of specific commitments include the Czech Republic, Hungary, and the Slovak Republic, each with more than 300 sectors/modes of supply scheduled. Tables 7 and 8 and Annex 3 provide more country-specific data.

The average coverage of MA commitments for the 'HIC' group is 40.6 percent; that for developing countries 9.4 percent; and that for large developing countries 17.1 percent. If these figures are related to the simple 'count' of the number of sectors where commitments were made, it can be observed that 'HIC' countries tend to be more liberal. That is, the proportion of commitments implying either a '1' (no restriction) or a 0.5 (some restriction, but bound) is higher than for developing countries. In Table 4 this can be seen in the third row, which divides the average 'coverage' of commitments by the 'count'. This ratio for the large developing country group is almost 20 percentage points lower than for the 'HIC' group. Some 56 percent of the 'HIC' group's commitments imply 'no restrictions', as compared to 36.7 percent for the group of large developing countries. Although many developing countries made only a limited number of specific commitments, many of these involve 'free' access: on average, 47.3 percent of commitments imply 'no restrictions'. Table 4 also reports the importance of 'no restriction' commitments relative to the GNS list (i.e., the maximum possible). Such commitments by 'HIC' members account for 30.5 percent of the total. For developing countries as a whole the figure is 6.7 percent; for the large developing country group the number is 10.9 percent.

Identical ratios were calculated for NT commitments. A comparison of commitments on NT and MA reveals that all countries tend to be more liberal with regard to the former, and that the difference between country groups narrows somewhat. There is a very high correlation between commitments on MA and NT. This can be seen from the last row of Table 4, which reports the proportion of commitments where the value of a MA cell is equal to the corresponding NT cell. For 'HIC' the figure is 89 percent, and for the other countries it is 96 percent. Finally, the next to last row of Table 4 reports the magnitude of commitments where 'no restriction' applies to *both* MA and NT for a given sector/mode of supply. The figure for 'HIC' is 28 percent, and that for the other countries, 6.4 percent. These numbers vividly illustrate how far away GATS members are from attaining 'free trade' is services, and the magnitude of the task that remains.

Table 4: Sectoral Coverage of Specific Commitments (percent)

	'HIC' Members	All Other Countries	Large Developing Nations
Market Access (MA):			
Average 'count'(sectors-modes listed as a share of GNS total)	53.3	15.1	29.6
Average coverage (sectors-modes listed as a share of GNS total, weighted by openness and binding scale factors)	40.6	9.4	17.1
Coverage/'count' (average coverage as a share of the average count)	76.2	62.3	57.7
'No restrictions' as a share of total offer made (no scaling)	56.4	47.3	36.7
'No restrictions' as a share of GNS total	30.5	6.7	10.9
National Treatment (NT):			
Average 'count'(sectors-modes listed as a share of GNS total)	53.3	15.1	29.6
Average coverage (sectors-modes listed as a share of GNS total, weighted by openness and binding scale factors)	42.4	10.2	18.8
Coverage/'count' (average coverage as a share of average count)	79.5	67.5	63.5
'No restrictions' as a share of total offer made (no scaling)	65.1	60.4	49.3
'No restrictions' as a share of GNS total	35.3	8.5	14.6
Memo items:			
No restrictions on MA *and* NT as a share of GNS total	28.0	6.4	10.0
Share of sectors (incl. unscheduled) where coding for NT and MA is the same (as a share of GNS list).	89.3	96.1	n.a.

The data reported in Table 4 do not take into account the relative importance of different service activities in GDP (i.e., the 'size' of the various service markets), or the relative importance of countries in the world economy (i.e., the 'size' of the different GATS Members). Table 5 reports coverage indicators for 'HIC' and the other countries that incorporate an attempt to take these factors into account. Table 5 pertains to MA commitments only, given that these tend to be more restrictive than those on national treatment. For ease of comparison, the first row repeats the unweighted average sectoral coverage ratios reported in Table 5. The second row illustrates the importance of taking into account the relative importance (size) of individual GNS service items (see Annex 1 for the output weights used; the same weights were employed for all countries). Sectoral coverage indicators rise substantially. 'HIC' coverage increases by 10.6 percentage points (or 26 percent) to 51.2 percent; developing country coverage rises by 1.8 percentage points (or some 17 percent). Thus, commitments were made in activities that are of 'above average' importance in GDP terms. The third row in Table 5 relates the specific commitments, weighted by sectoral contributions to GDP, to the global market for services, as measured by global GDP. 'HIC' commitments account for 49 percent of the global services market. Those by all developing countries represent only 4.8 percent of the world market, reflecting the low share of developing countries in global GDP (estimated at 13.7 percent).[25]

Table 5: Sectoral Coverage of Specific Commitments on Market Access, Weighted by Sectoral Contributions to GDP and Country Shares in Global GDP

	'HIC' Group	Developing Group
1. Sectoral coverage, weighted by 'restrictiveness'	40.6	9.4
2. Sectoral coverage scaled by 'restrictiveness' and GDP weights	51.2	11.2
3. Sectoral coverage weighted by restrictiveness, sectoral contributions to GDP and country share in world GDP	49.4	4.8
Memo: GDP weights	82.0	13.7

Table 6 reports the results of coverage ratio calculations incorporating an effort to take into account the relative importance of modes of supply across service sectors as well as the share of service sectors in GDP. For this purpose each Member's commitments were first aggregated to the '2-digit' GNS level (see Annex 1), and divided by the maximum number of possible commitments for each of these sectors. Each of the four modes was then given a weight, reflecting a subjective assessment of the relative importance of the modes for each of the 2-digit sectors. Adjustments were also made to reflect the fact that country offers for some service sectors almost invariably exclude certain activities. Thus, R&D service offers tend to be limited to social science activity; primary and secondary level education services to specialized activities; insurance commitments usually exclude life insurance; maritime transport excludes cabotage and liner traffic; air transport commitments are limited to certain support services; and road transport is usually limited to international shipment. Annex 4 reports the weights applied. Table 6 shows that incorporating mode-of-supply weights and adjusting for sector-specific exclusions has little impact on the coverage ratios reported in Table 5. The 'HIC' coverage measure declines somewhat, falling from 51.2 percent to 48.5 percent. In contrast, the coverage ratio for developing countries rises slightly, increasing from 11.2 to 11.4 percent. Coverage indicators therefore do not appear to be very sensitive to incorporating 'mode of supply weights'.

[25] Sources for GDP data were the World Development Report and the World Bank STARS database.

Table 6: Sectoral Commitments Adjusted for Mode of Supply Weights, Proportion of Service Sectors Excluded from Liberalization, and Sector Weight in GDP

	'HIC' Group	Developing countries
Market access commitments	48.5	11.4
National treatment commitments	53.0	12.6

Table 7 and 8 contain country-specific data for the 'HIC' and 'large developing country' groups, respectively. These Tables will not be described in detail, but have been included so as to give a flavor of the variance of commitments across individual countries. It is worth repeating that sectoral coverage indices are of only limited usefulness from an economic perspective, as no account can be taken of the actual restrictiveness of the policy stance maintained by different countries by sector/mode of supply. The least ambiguous measure in this respect is the 'no restrictions' coverage ratio.[26] This is 28 percent on average for the 'HIC' group, and 6.4 percent on average for the other GATS Members. Much remains to be done therefore. As it seems reasonable to presume that the 'easiest' sectors were scheduled by countries, these relatively low coverage indicators suggest that for the foreseeable future most trade in services will remain subject to market access and/or national treatment restrictions.

The average coverage of sectoral commitments is of course greater than the 'no restriction' measure. Weighted by sectoral contributions to GDP, it is about 50 percent for 'HIC' and 11 percent for the developing country group. The average sectoral coverage ratio of the 'bottom' 50 developing countries (which account for over 60 percent of the group in number) is substantially below the group average: only 3 percent. As shown in Annex 3, four countries--Algeria, Bangladesh, Fiji, and Tanzania--made commitments for only one sector; five others scheduled two sectors--Belize, Burkina Faso, Madagascar, Sri Lanka, and Uganda. While many of these countries are small and have very low per capita incomes--reducing pressure from trading partners to schedule more sectors--this by no means justifies such a passive stance.

[26] The reciprocal of the 'no restrictions' ratio--with services weighted by shares in GDP--is an indicator of the extent to which access to services markets is 'affected' by policy. It can be seen as a direct analogue of the standard NTB frequency indicator if unweighted by GDP shares; and the NTB coverage ratio if weighted.

Table 7: Specific Commitments by 'HIC' Countries (percentage)

Totals or Average		Australia	Austria	Canada	EU	Finland	Hong Kong	Japan	Korea	Mexico	New Zealand	Norway	Singapore	Sweden	Switzer-land	Turkey	USA
330.4	Count (No. of commitments)	360	412	352	392	328	200	408	311	252	276	360	232	320	400	276	384
	Market Access:																
40.6	Average sectoral coverage	46.6	55.4	43.3	44.4	42.4	18.4	50.4	31.5	22.3	36.5	45.3	27.0	42.8	50.7	34.4	50.6
53.3	Count/GNS list total	58.1	66.5	56.8	63.2	52.9	32.3	65.8	50.2	40.6	44.5	58.1	37.4	51.6	64.5	44.5	61.9
76.1	Av. Sec. Cov./[Count/GNS list]	80.3	83.4	76.3	70.3	80.2	57.0	76.6	62.7	55.0	81.9	78.1	72.2	83.0	78.6	77.4	81.8
188.9	Count of 1's (no restrictions)	222	283	186	169	202	90	230	134	79	189	210	118	215	247	168	244
56.4	No restrictions/count	61.7	68.7	52.8	43.1	61.6	45.0	56.4	43.1	31.3	68.2	58.3	50.9	67.2	61.8	60.9	63.5
	National treatment:																
42.4	Average sectoral coverage	49.2	55.6	46.0	49.6	51.6	7.3	47.9	37.3	25.9	36.9	47.5	25.0	43.0	51.4	38.1	55.8
53.3	Count/GNS list total	58.1	66.5	56.8	63.2	52.9	32.3	65.8	50.2	40.6	44.5	58.1	37.4	51.6	64.5	44.5	61.9
79.5	[Count/GNS list]/Av. Sec. Cov.	84.7	83.6	81.1	78.4	97.6	22.8	72.8	74.3	63.7	83.0	81.8	66.8	83.3	79.6	85.7	90.1
218.7	Count of 1's (no restrictions)	257	287	220	233	317	41	199	187	124	182	237	152	217	251	213	324
65.1	No restrictions/count	71.4	69.7	62.5	59.4	96.6	20.5	48.8	60.1	49.2	65.9	65.8	65.5	67.8	62.8	77.2	84.4
	MA and NT comparisons:																
1.2	No. of NT 1's/No. of MA 1's	1.2	1.0	1.2	1.4	1.6	0.5	0.9	1.4	1.6	1.0	1.1	1.3	1.0	1.0	1.3	1.3
173.4	No. of matched 1's: MA=NT=1	219	268	180	163	199	31	155	133	78	166	204	115	207	241	154	218
51.4	Matched 1s/count	60.8	65.0	51.1	41.6	60.7	15.5	38.0	42.8	31.0	60.1	56.7	49.6	64.7	60.3	55.8	56.8
28.0	Matched 1s/GNS total	35.3	43.2	29.0	26.3	32.1	5.0	25.0	21.5	12.6	26.8	32.9	18.5	33.4	38.9	24.8	35.2
18826	GDP ($ billion)	295	185	494	6662	94	78	3671	296	329	41	113	46	221	241	100	5920
81.6	World GDP share	1.3	0.8	2.1	28.9	0.4	0.3	15.9	1.3	1.4	0.2	0.5	0.2	1.0	1.0	0.4	25.7
38.3	MA cov. weighted by GDP	0.6	0.4	0.9	12.8	0.2	0.1	8.0	0.4	0.3	0.1	0.2	0.1	0.4	0.5	0.1	13.0

NOTE: 'HIC' group averages include Iceland and *Liechtenstein*

Table 8: Specific Commitments by the Largest Developing Country GATS Members (percentage)

Total or Average		Argentina	Brazil	Chile	China	Colombia	India	Indonesia	Israel	Malaysia	Pakistan	Philip-pines	Poland	South Africa	Thailand	Vene-zuela
183.7	Count (No. of commitments)	208	156	140	196	164	132	140	180	256	108	160	212	288	260	156
	Market Access:															
17.1	Average sectoral coverage	26.4	7.5	9.8	13.9	13.9	7.2	13.7	19.1	28.1	8.2	21.1	21.5	32.6	19.4	13.6
29.6	Count/GNS list total	33.6	25.2	22.6	31.6	26.5	21.3	22.6	29.0	41.3	17.4	25.8	34.2	46.5	41.9	25.2
57.6	Av. Sec. Cov./[Count/GNS list]	78.6	29.8	43.2	44.1	52.4	33.7	60.7	65.8	68.0	47.2	81.9	62.7	70.1	46.2	53.9
67.3	Count of 1's (no restrictions)	136	19	36	42	62	10	42	90	100	30	102	79	150	59	53
36.6	No restrictions/count	65.4	12.2	25.7	21.4	37.8	7.6	30.0	50.0	39.1	27.8	63.7	37.3	52.1	22.7	34.0
	National treatment:															
18.8	Average sectoral coverage	26.4	8.5	10.7	14.6	13.2	8.4	10.8	19.2	33.4	8.2	24.1	28.3	35.2	26.8	13.6
29.6	Count/GNS list total	33.6	25.2	22.6	31.6	26.5	21.3	22.6	29.0	41.3	17.4	25.8	34.2	46.5	41.9	25.2
63.3	Av. Sec. Cov./[Count/GNS list]	78.6	34.0	47.5	46.2	50.0	39.4	47.9	66.1	80.9	46.8	93.4	82.8	75.9	63.9	53.9
90.5	Count of 1's (no restrictions)	136	27	48	54	62	31	30	91	166	38	144	164	182	132	53
49.3	No restrictions/count	65.4	17.3	34.3	27.6	37.8	23.5	21.4	50.6	64.8	35.2	90.0	77.4	63.2	50.8	34.0
	MA and NT comparisons:															
1.5	No. of NT 1's/No. of MA 1's	1.0	1.4	1.3	1.3	1.0	3.1	0.7	1.0	1.7	1.3	1.4	2.1	1.2	2.2	1.0
64.3	No. of matched 1's (MA=NT=1)	136	17	36	37	62	10	28	89	90	30	91	79	149	58	53
35.0	Matched 1s/count	65.4	10.9	25.7	18.9	37.8	7.6	20.0	49.4	35.2	27.8	56.9	37.3	51.7	22.3	34.0
10.4	Matched 1s/GNS total	21.9	2.7	5.8	6.0	10.0	1.6	4.5	14.4	14.5	4.8	14.7	12.7	24.0	9.4	8.6
2611	GDP ($ billion)	229	395	41	506	49	242	126	70	57	473	52	84	115	110	61
11.3	Share in world GDP	0.99	1.71	0.18	2.19	0.21	1.04	0.55	0.30	0.25	2.05	0.23	0.36	0.50	0.48	0.27
1.6	MA cov. (weighted by GDP)	0.26	0.13	0.02	0.31	0.03	0.08	0.08	0.06	0.07	0.17	0.05	0.08	0.16	0.09	0.04

Figure 1 plots the relationship between per capita income and number of sectors where commitments were made. It reveals that although a number of poor countries scheduled a significant number of sectors, most did not. It is unclear why coverage ratios (unscaled) are not close to 100 percent for all Members. The mere fact that so much of the service sector was not scheduled must be counted against the GATS. The 'cost' of making specific commitments is after all modest, even for those countries that do not favor liberalization, as any measure violating national treatment or market access may be scheduled. This argument applies *a fortiori* to those countries that either desire to liberalize access to their service markets or already maintain a liberal policy stance.

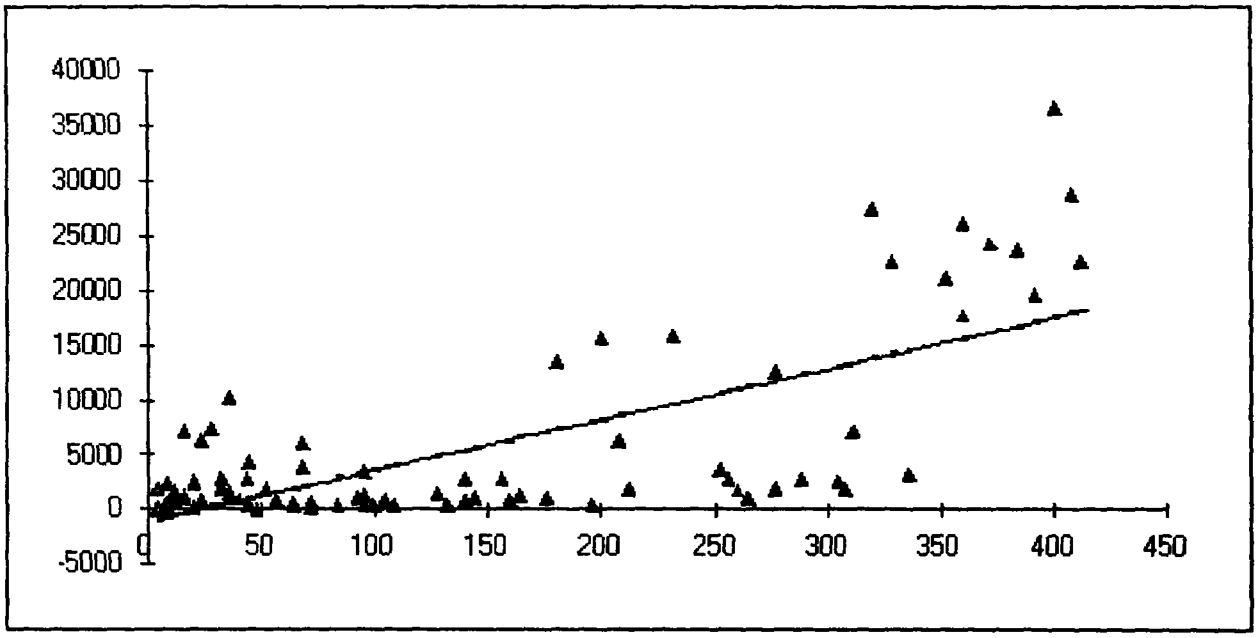

Figure 1: Relationship Between Per Capita Income and Specific Commitments

Table 9 reveals there is a fair amount of variance in the sectoral coverage of 'HIC' commitments. The fewest commitments were made in sectors such as land, water and air transport, postal services, basic telecoms, R&D, education, health, social, and recreation and social services. Of these 'sensitive' sectors, developing countries have a potential export interest in the last three, insofar as most 'personal' services are included in these categories (none of which were scheduled). But the coverage of business services, computer-related services, and construction is quite high. These sectors cover many activities where developing countries have an export potential.

Table 9: Commitments by Sector

Sector	Number GNS items and modes of supply	Average Number of Commitments		Commitments/GNS Items per Sector	
		'HIC'	'LDC'	'HIC'	'LDC'
Construction	20	13.6	2.9	68.1	14.2
Motor Vehicle Repair	4	2	0.3	50.7	6.7
Wholesale Trade	8	4.9	0.5	61.8	6.1
Retail Trade	8	4.9	0.7	61.8	8.9
Hotel/Restaurants	4	3.3	2.7	81.9	68.3
Land Transport	40	10.9	2.0	27.2	5.0
Water Transport	48	6.1	2.6	12.7	5.5
Air Transport	20	4.5	1.3	22.4	6.6
Auxiliary Transport	20	5.7	1.1	28.5	5.7
Postal Services	4	1.4	0.6	35.4	15.2
Basic Telecom	28	2.2	1.1	7.8	4.1
Value-added Telecom	28	21.1	4.6	75.4	16.5
Financial Services	60	35.4	11.7	59.0	19.5
Real Estate Services	8	3.7	0.3	46.2	3.8
Rental Activities	20	10.9	1.0	54.6	5.2
Computer-related	20	15.6	4.3	78.1	21.4
R&D Services	12	4.4	1.0	37.0	8.3
Business Services	108	62.9	11.3	58.3	10.5
Refuse Disposal	16	9.2	1.0	57.6	6.3
Education	20	6.3	1.0	31.3	5.2
Health and Social	24	5.4	1.8	22.3	7.6
Recreation/Culture	48	14.9	4.3	31.1	9.0

Although market access commitments by OECD countries tend be restrictive with respect to activities where developing countries have a comparative advantage--i.e., both low- and high-skill labor-intensive activities that require either temporary entry or establishment/work permits--nothing is to be gained from a 'retaliatory' policy stance. The majority of countries are simply too small to be able to influence market access policies of large traders. Non-liberalization by trading partners reduces the potential gains from liberalization, but by no means eliminates them. The Annex on the movement of natural persons--currently the only mode-of-supply-specific part of the GATS--only requires that natural persons who are service suppliers or employed by a service supplier of a Member be allowed to provide services *in accordance with the terms of specific commitments* relating to entry and temporary stay of such persons. The extent to which labor movement is allowed is therefore completely dependent on what is specified in the schedules. Specific restrictions on labor movement may be horizontal in nature (e.g. a domestic means test for all incoming labor) or sector-specific. Most Members only allow for entry of specialists and higher level management staff, significantly curtailing the scope for cross-border (i.e. non-establishment related) trade in services. Similarly, a lack of general disciplines on discriminatory licensing practices involving citizenship or permanent residency requirements can be expected to weaken the GATS' impact on trade in professional services.[27]

Most of the potential gains for developing countries associated with GATS membership will result from liberalizing access to their own markets. There is substantial evidence that many of the constraints that reduce the economic efficiency of service industries are "home grown," in that governments have not always pursued the appropriate policies (UNCTAD and World Bank, 1994). Thus, policy measures should focus on augmenting domestic productive capacity, increasing quality, establishing a reputation for reliable supply, etc. Services are often intermediate inputs into the production of goods, so that the availability of higher quality and/or lower cost services will increase the output of goods and make them more competitive on world markets. The level of specific commitments suggests that governments did not grasp the opportunity to bind the status quo, let alone liberalize access to service markets. The question then is whether substantial liberalization will occur in the future.

V. Possible Incentive Effects of the Framework

Progressive liberalization is a central objective of the GATS. How well will the structure put in place perform in expanding the coverage of bindings and inducing substantial liberalization of access to service markets? Concerns can be expressed regarding both dimensions. Problems include the lack of *transparency*, *sector-specificity*, *the modalities of scheduling*, and the *limited number of generic rules*. All of these reflect the structural weaknesses of the GATS.

The GATS does not do anything near enough to further the goal of *transparency*, which should be a fundamental objective of any multilateral agreement. No information is generated on sectors, sub-sectors and activities in which no commitments are scheduled--most often the sensitive ones where

[27] A Ministerial Decision taken in Marrakesh established a negotiating group on movement of natural persons to undertake negotiations on further liberalization of such movement for the purpose of supplying services. This group is to conclude its talks within six months of the entry into force of the WTO. Although ongoing, it is not likely that much will emerge to give developing countries greater access to potential export markets, or to strengthen general disciplines applying to this mode of supply.

restrictions and discriminatory practices abound. A commitment consisting of the single word 'unbound' (see Table 3) does not impart any information, except that the government does not want to have its hands tied in any way, and that the regulatory stance is therefore likely to be restrictive. This lack of transparency is a serious shortcoming when one considers the nature and origin of impediments to trade in services (i.e. regulatory barriers at both the national and sub-national levels). A negative list approach would have significantly enhanced transparency. Even if this would have resulted in country-specific 'phone books' of non-conforming measures, that would be no bad thing. Currently there is simply no comprehensive cross-country source of information for service providers concerning the regulatory regime that applies. If Members remain firmly committed to the positive list approach, agreement should be sought that all Members compile and publish (through the WTO Secretariat) this information, on a sector-by-sector basis, within an agreed upon time frame. Without such transparency, negotiations are made more difficult, and will be driven primarily by powerful export interests.

There is also a great deal of variance across countries regarding the 'transparency' of the commitments themselves. Some Members have clearly invested substantial effort in listing all relevant applicable laws and regulations that may limit access. Others simply make reference to a limitation, but do not specify the applicable laws. Limitations that are mentioned in a schedule may be rather vague, and therefore open to interpretation (indeed, require it).[28] Dispute settlement in the GATS is therefore likely to revolve around interpretation of country schedules. Ambiguity, in conjunction with the importance of the schedules, suggests that the number of cases may be substantial. Overlap between national treatment and market access obligations may prove to be particularly problematical in this regard, as any market access restriction will violate national treatment if it applies only to foreign service providers. For example, a Member may have made a 'no restriction' commitment under national treatment, but scheduled a limitation on the maximum equity share that can be held by a foreign supplier choosing to establish. Given the inclusion of both commitments in the GATS, greater care should have been taken to ensure that the two commitments are distinct.

The structure of the GATS implies that negotiations in the services area were (and will be) *sectoral*, and can be expected to be driven very much by the concerns and interests of the major players in each industry. At some level a sectoral approach is probably unavoidable, given the widely differing regulatory regimes across countries and sectors. But to foster MFN-based liberalization, sectoral agreements should be firmly embedded in a framework of *general* rules and disciplines. The emphasis

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[28] It is sometimes not even clear what limitations apply to what sector or sub-sector. Some schedules omit to mention a specific mode of supply for a given sector. Members at times also diverge from the positive/negative list approach to scheduling, instead opting for a positive/positive list approach. That is, the sectors to which the market access article and national treatment principle apply are listed, and then for each mode of supply it is specified what is offered (as opposed to a listing of the limitations on national treatment or market access that are maintained). This reduces transparency further, by not identifying all the policies that conflict with market access and/or national treatment. As noted previously, it is also not clear whether non-listing of horizontal measures on modes of supply implies a binding of 'no restrictions'.

put on 'absolute' sectoral reciprocity may prove to be especially troublesome insofar as incremental liberalization becomes less feasible and the scope for cross-issue tradeoffs is reduced. The scope for turf fights between regulatory agencies may be enhanced, making it more difficult to take an economy-wide perspective and make trade-offs across issues. The positive list approach may also make it more difficult for a government to add sectors to its schedule. Those industries affected can argue against their inclusion: "why us and not them" (referring to other sectors that are excluded). Under a negative list approach each industry seeking 'special treatment' is put in the position of having to justify why the rules should not apply to it, even though they apply to everyone else; under a positive list the government must be ready to confront each industry that it seeks to subject to multilateral disciplines. As mentioned previously, it is likely that the 'easy' sectors will have been included first, leaving the more 'sensitive' sectors to be dealt with in the future.

The scheduling of commitments by modes of supply may further distort incentives and resource allocation by creating the opportunity for biasing incentives towards a particular mode of supply. Somewhat ironically, given the early resistance by many developing countries to discussing establishment-related matters in the GNS, the commitments lodged by these countries under the commercial presence mode of supply tend to be the least restrictive. This is perhaps not surprising, as this mode appears to generate the most in terms of local content/domestic value added. However, by being more restrictive on other modes, firms may be given an incentive to engage in 'tariff-hopping' type investment. Indeed, commitments on commercial presence may amount to disguised trade-related investment measures (TRIMs), insofar as foreign service providers are effectively compelled to use this mode and in the process are subjected to measures that violate either market access or national treatment. At the same time, commitments relating to commercial presence may be subject to the right to maintain or impose authorization and/or screening procedures (i.e., horizontal restrictions), and the criteria or specific measures that underpin such procedures may not necessarily be clearly defined or specified in the schedule.

Another potentially perverse incentive created by the combination of specific commitments and the positive list approach is that Members may be induced to adopt policies that are in principle prohibited, and then seek to negotiate these away over time. Policies in many countries may be consistent with market access and national treatment obligations. Rather than locking this in, the GATS allows for the future imposition of restrictions (creation of 'negotiating chips'). Although the non-generality of national treatment was probably unavoidable, the impact of the GATS would have been substantially greater if it had been required that the *status quo* be bound for all sectors. The market access article is a step in the right direction, but it also should have been a general obligation subject to a negative list of exemptions. Moreover, it is too weak. Market access is not defined in the GATS, there being instead a finite list of measures prohibited in principle, leaving others that have similar effects untouched. The Article would have been strengthened, and dispute settlement facilitated, if the words "or measures with equivalent effect" had been added. EU experience has demonstrated the importance of this in enforcing the Treaty of Rome. Language to this effect would have allowed violation complaints to be brought.

The absence of such wording puts all the weight on nonviolation, a much weaker mechanism.

To the extent that market access restrictions are maintained, concern can also be expressed regarding their possible impact on the MFN obligation. Given that the in principle prohibited market access restrictions are quantitative in nature--limits on the number of firms, their assets, or their turnover--there appears to be a 'natural' incentive to negotiate increases in market access in quantitative terms as well. Suppose that currently only three foreign firms are established, and are restricted to four lines of activity. Trade negotiators might then seek to increase the number of firms and/or lines of permitted activity. That is, the GATS' approach to liberalization has a built-in incentive for the reciprocal negotiation of 'VIEs'. If a country permits a few additional firms into a sector, the nationality of these firms may matter, in that incentives may exist to 'ensure' that firms from certain countries obtain access. Market access/share criteria may result in managed trade, as 'voluntary import/investment expansion' agreements can easily be inconsistent with MFN.

Implications for developing countries

The GATS imposes few limitations on national policy, only requiring that no discrimination across alternative sources of supply occurs. It allows parties to implement policies that are detrimental to--or inconsistent with--economic efficiency. A good example is the Article specifying the conditions under which measures to safeguard the balance-of-payments may be taken, such measures rarely being efficient. It can also be noted that the GATS does not require a participating country to alter regulatory structures, or to pursue an active antitrust or competition policy. Liberalization of trade and investment may need to be augmented by regulatory change (frequently deregulation) and an effective competition policy in order to increase the efficiency of service sectors such as finance, transportation, and telecommunications. If liberalization is simply equated with increased market access for (certain) foreign suppliers, this may have little effect in markets that are characterized by a lack of competition. The main result will then simply be to redistribute rents across firms.

Much more importantly, many developing countries have been able to accede to the GATS with only minimal commitments. The adoption of a positive list approach was partly due to arguments by developing countries that a negative list was too resource intensive to be feasible within the time frame envisaged (completion of the round by end-1990). Acceptance of this argument, in conjunction with the willingness to accept very little in the way of scheduled specific commitments and the fact that a number of the framework's rules apply *only* if specific commitments are made, implies that the GATS has very few implications for the majority of developing countries. Indeed, its impact may be negative. The non-generality of national treatment, and the sector-specificity of market access commitments reduces the value of the GATS to governments seeking to liberalize. Lobbies that oppose liberalization cannot be told that GATS membership implies national treatment for all sectors. Instead, it must explicitly list each and every sector to ensure that national treatment and market access obligations will apply. This clearly makes matters much more difficult for governments that 'need' an external justification for resisting protectionist pressures.

The GATS does not emulate the GATT and embody special and differential treatment provisions. But it continues the GATT tradition of putting very little pressure on small and poor developing countries in particular to fully participate, as these have little to offer in the multilateral mercantilistic game of 'give and take'. However, these are arguably the countries where a liberal policy stance is crucial. These countries have largely been left to pursue liberalization unilaterally; the GATS allows them to lock this in if so desired, but does not do much to help achieve a liberal policy environment.

VI. Options for Fixing the Framework

There are many challenges that need to be addressed by negotiators if the GATS is to become an effective and therefore *credible* instrument of multilateral liberalization. Agreement on disciplines in the areas of subsidies, procurement, and safeguards must be reached. The sectoral coverage of the GATS must be greatly expanded through binding of all measures violating national treatment/market access. The set of generally applicable rules and disciplines must grow significantly, and the weight of the specific commitments reduced. The approach taken towards scheduling commitments in the Uruguay round needs to be critically assessed to determine whether it will be conducive to achieving significant liberalization of service markets in the future.

The first order of business should be to explore whether a more general approach--similar to that of the EU, NAFTA, or the Australia-New Zealand Closer Economic Relations Trade Agreement--might be feasible.[29] Given that negotiators were well aware of the approaches taken towards liberalizing service markets in these regional contexts--i.e., across-the-board disciplines for all modes of supply with limited sector-specific exclusions--presumably this is not an option. But it should be possible to move further towards this model. Deardorff (1994) and Snape (1994) have argued that the key requirement is to make national treatment a general obligation. Deardorff suggests that the *quid pro quo* for this could be that each country is allowed to levy taxes--perhaps prohibitive--on foreign providers. These taxes would be scheduled, and become the focal point for future liberalization efforts. Snape (1994) also proposes the adoption of general obligations prohibiting all forms of discrimination against foreign suppliers, but rather than tariffication suggests seeking agreement on a negotiated set of legitimized measures that may be used to reduce the contestablity of any service market for foreign suppliers. Future negotiations could then focus on these measures.

The current wording of the GATS implies that tariffication should pertain to existing market access restrictions as well as limitations on national treatment. Both Deardorff and Snape focus on classic

[29] See Hoekman and Sauvé (1994) for a description of these arrangements.

national treatment, i.e., discrimination against *foreign* suppliers. Tariffication of discriminatory measures appears to be straightforward in principle, as each government can simply set a tax rate. In practice, however, difficulties may arise in determining the nationality (origin) of firms, and in constraining 'opportunistic' behavior. Member schedules suggest that tariffs are likely to be lower on establishment than on cross-border trade, thus fostering establishment. Because origin rules will invariably exempt ventures with some degree of local ownership, policies can be expected to favor joint venture-based establishment. This is not much of a problem insofar as the current incentive structure does this already. However, it is important that tariffication not make the policy stance *more* restrictive. This may easily happen, as no one knows what the tariff equivalent of the *status quo* is. In many instances policy towards foreign providers currently may be consistent with national treatment, but countries have avoided scheduling (binding) this state of affairs. To the extent that entry is in principle free (the applied policy is liberal) this should not be supplanted with discriminatory taxation of foreign providers. If the status quo is relatively liberal, this should be reflected in tax rates that are imposed. Thus, not only should established foreign firms be grandfathered from any 'tariffication' if they are presently granted national treatment, no tariffication should be permitted in such sectors. The argument for tariffication is greatly weakened if this cannot be achieved. Its main rationale is to harness the mercantilist instincts/approaches developed in the GATT context to liberalizing service markets. If conditions are already liberal, tariffication is counterproductive and may be captured by--or create--vested interests that will oppose future reductions.[30] It may therefore be preferable to pursue the proposal made by Snape (1994) to seek to agree to a limited set of policies that may be applied by GATS members to discriminate against foreign suppliers. What those measures might be is unclear, however, as illustrated by lengthy discussions in the GNS. Clearly on the national treatment side a tax of some sort is the main option, leading to tariffication-type issues.

Before abandoning the tariffication proposal, it can be noted that it might be more readily applied to deal with *non*-discriminatory market access restrictions. There is no reason why potential domestic entrants would not be willing to pay an 'entry fee' to contest a market currently subject to QR-type barriers. One 'tariffication' option could be to periodically auction off such QRs. This would appear most appropriate for regulated monopolies and for self-regulated industries where there is a *numerus fixus* constraint on new entry (e.g., certain professions). There is no problem with determining origin if the measures are applied on a nondiscriminatory basis. The focus can then simply be on all potential entrants. Another possibility for regulated activities is to exchange price reduction commitments, based on comparisons of prices charged by a supplier in a market with the average of several of the lowest cost suppliers of the service concerned. This requires a substantial amount of information, and may not be feasible for some sectors. However, multilateral scrutiny of pricing policies could be sought, with an agreement to extend the WTO's dispute settlement mechanism to the pricing practices of monopolies.

[30] Thus the difference with agriculture, where stratospheric bindings were considered an acceptable price to pay to get this sector back into the GATT, is that the current policy regime in many service sectors may be much less distorted.

This could help get 'around' existing legal constraints on the reach of competition law in many jurisdictions.

Realism suggests that proposals for improving GATS build upon the existing structure as much as possible. Much can be done if the willingness to do so is there. The basic elements have been identified earlier: (1) adopt a negative list approach to scheduling for transparency purposes, with a transition period that gives Members sufficient time to do this;[31] (2) eliminate all overlap between national treatment and market access, ensuring that the latter applies only to non-discriminatory measures; (3) seek to agree to horizontal disciplines on modes of supply, and eliminate mode-of-supply-specific limitations in the schedules; (4) expand the reach of the market access article by including the term "or measures with equivalent effect"; (5) convert QR-like market access restrictions to price-based equivalent measures by auctioning them off, thus ensuring that MFN and national treatment are satisfied; (6) make all framework disciplines generally applicable by eliminating all instances where rules are currently conditional upon the scheduling of specific commitments; and (7) agree to a formula-based approach for future liberalization and expansion of the sectoral coverage of the GATS. GATT experience suggests that progress in MTNs is facilitated if negotiators use a quantifiable focal point. A 'formula' approach could help negotiations to make progress. A target could be established for the share of each Member's service sector that should be scheduled with 'no restrictions' and for the share of the GNS list that should be bound (scheduled).

Discussions and disciplines in the GATS context appear to be on a sector-specific track. Sectoral disciplines may make sense in principle insofar as necessary to take into account idiosyncracies of particular sectors. But the current format of the schedules allows for too much discretion and ambiguity. Sectoral agreements should be in the nature of annexes that extend or complement generally applicable, common rules. These general disciplines should pertain to modes of supply, establishing general ground rules. Elimination of the mode of supply criterion in the specific commitments may be relatively straightforward. *Nothing in the GATS compels Members to schedule commitments by mode of supply.*[32] The horizontal commitments already pertain to the four modes of supply, independent of sector. What is required is that horizontal commitments no longer consist of a positive list of bound policies, but are transformed into a negative list of policies that are inconsistent with in principle generally applicable rules and disciplines for each of the modes of supply. A model that could be emulated in this connection is the one pursued in the NAFTA, where generic disciplines were negotiated for modes of supply. This is ambitious, of course, and may well be feasible only if goods and services are treated symmetrically (as they are in the NAFTA). Developing common disciplines on investment in the WTO, applying to goods and services, should therefore be a matter of some urgency.

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[31] The offer of grant-based financial assistance for low-income developing countries can greatly facilitate this.

[32] Article XX of GATS (Schedules of Specific Commitments) states that separate commitments must be made for national treatment and for market access, but does not require that this be by mode of supply.

Outstanding Issues: Subsidies, Safeguards, and Procurement

Space constraints prohibit a detailed discussion of the outstanding issues that remain on the immediate negotiating agenda.[33] All three issues are very important, and the disciplines that are agreed will influence the effectiveness of the GATS as an instrument for binding policies and promoting liberalization. Without subsidy disciplines the scope for contesting markets that have been scheduled may be limited. Similarly, if safeguard actions are relatively easy to implement, specific commitments may lose much of their impact. Expanding the reach of the GATS to government procurement is particularly important, as the rules and procedures that are negotiated will help determine the potential for growth in developing country exports of services. In contrast to most of the other Tokyo Round codes--e.g., the agreements on technical barriers to trade (standards), import licensing, customs valuation, subsidies, and antidumping--the Tokyo round Government Procurement Agreement (GPA) could not be 'multilateralized'. With the reintroduction of agriculture and textiles and clothing into the GATT, procurement has therefore become the major 'hole' in the coverage of the GATT and the GATS. As far as services are concerned, a key issue here will be to ensure consistency with the GPA, which was extended to services in the Uruguay round. Noteworthy in this regard is that the GPA makes no distinctions between modes of supply. Indeed, it *requires* signatories not to discriminate on the basis of mode of supply. This provides another reason to eliminate the mode of supply distinction in the specific commitments. However, as noted previously, the fact that the GPA was somewhat 'infected' by the GATS through the introduction of sectoral non-application and reciprocity conditions is troubling.

VII. Concluding Remarks

The GATS is the first multilateral agreement pertaining to policies affecting trade in services. As such it is not surprising to find that the 'newness' of the topic is reflected in the minimal liberalization that was achieved. More worrisome is that the structure of the GATS (the framework) allows Members not to bind the status quo in many sectors. Very much remains to be done to make the coverage of the GATS universal. The fundamental question then is whether the GATS will induce Members to do much more in future negotiating rounds. Although a number of doubts have been expressed in this connection, many of its architectural shortcomings can be addressed relatively easily; while others are probably best dealt with by expanding disciplines to apply to both goods and services. Key 'priority' requirements were argued to be the scheduling (binding) of all sectors--preferably as part of a shift to a negative list approach--and the elimination of modes of supply in the schedules. The credibility of the GATS as a multilateral instrument of liberalization greatly depends on the political will of Members to agree to

[33] See Hoekman (1993) and Hoekman and Mavroidis (1995) for discussions on safeguards and government procurement.

market opening in the areas in which negotiations are ongoing (especially financial services, where the deadline is July 1995), and on their willingness to discuss and make changes to the structure of the GATS (Sauvé, 1995).

The transparency value of shifting to a negative list cannot be overemphasized. A reference to the experience obtained in agreeing to the Trade Policy Review Mechanism is appropriate here. Although most countries did not have much desire to subject themselves to a transparency-based review of their trade policies, the benefit of obtaining information on trading partners outweighed the perceived cost of being subjected to review as well. The result of the agreement to create the TPR has been that domestic groups (and the Ministry of Finance) have access to a substantial amount of information regarding the trade policy stance that is pursued, and can more easily compare this with policies applied by other countries. Greater transparency and better information will help analysts determine the costs and benefits of current policy in services sectors. Without objective data, analysis is greatly impeded, and therefore the formation of interest groups that would favor liberalization.[34] Objective attempts at tariffication and calculation of price-cost margins, even if not used as an explicit focal point for negotiations, can do much to expand the amount of information regarding potential market opportunities and relative restrictiveness of regulatory regimes. The WTO Secretariat or the OECD could be given the task to undertake such an effort (which should of course be adequately funded).

More generally it must be recognized that the problems involved in 'fixing' the GATS extend beyond services. Future multilateral efforts must center on eliminating the artificial goods-services distinction, and develop generic disciplines on FDI and labor movement. In this context attention could also be devoted to exploring whether and how market access commitments might be replaced with competition disciplines. Market access restrictions as defined in the GATS are, of course, not limited to services, although competition is often more restricted in these industries than in goods producing sectors. The subject of competition policy has been actively discussed as a likely topic for future multilateral negotiations under WTO auspices. The same applies to policies affecting investment. It will be important that attention is devoted to *both* goods and services in this connection, and that the same rules apply to goods and services (see the Chapter by Low and Subramanian in this volume). The likely further expansion of the multilateral trading system to include rules on policies affecting investment constitutes an additional important reason for developing horizontal, generally applicable disciplines on a mode-of-supply basis. Extending the GATS approach of scheduling by mode of supply on a positive list basis to the GATT context when addressing investment-related matters would be most unfortunate.

[34] A negative list approach to scheduling, while important and necessary, is not sufficient to allow analysis. An additional requirement is that comparable production, consumption and trade data are available. Members should be required to report such data for at least the 11 major GNS service sectors, and preferably on a '2-digit' basis (see Annex 1). See Hoekman and Stern (1991) more generally on data needs.

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Annex 1

GNS Classification List	'2-digit' output weights[35]
1. BUSINESS SERVICES	
A. Professional Services	8.0
a. Legal Services	
b. Accounting, auditing and bookkeeping services	
c. Taxation Services	
d. Architectural services	
e. Engineering services	
f. Integrated engineering services	
g. Urban planning and landscape architectural services	
h. Medical and dental services	
i. Veterinary services	
j. Services provided by midwives, nurses, physiotherapists and para-medical personnel	
k. Other	
B. Computer and Related Services	2.0
a. Consultancy services related to the installation of computer hardware	
b. Software implementation services	
c. Data processing services	
d. Data base services	
e. Other	
C. Research and Development Services	2.0
a. R.D services on natural sciences	
b. R.D services on social sciences and humanities	
c. Interdisciplinary R.D services	
D. Real Estate Services	5.0
a. Involving own or leased property	
b. On a fee or contract basis	
E. Rental/Leasing Services without Operators	2.0
a. Relating to ships	
b. Relating to aircraft	
c. Relating to other transport equipment	
d. Relating to other machinery and equipment	
e. Other	
F. Other Business Services	10.0
a. Advertising services	
b. Market research and public opinion polling services	
c. Management consulting service	
d. Services related to man. consulting	
e. Technical testing and analysis serv.	
f. Services incidental to agriculture, hunting and forestry	
g. Services incidental to fishing	
h. Services incidental to mining	
i. Services incidental to manufacturing	
j. Services incidental to energy distribution	
k. Placement and supply services of Personnel	
l. Investigation and security	
m. Related scientific and technical consulting services	

[35] Estimated share of 2-digit categories in total service sector output of an 'average' industrialized country. Adapted from UNCTAD and World Bank (1994, pp. 169-72). Adjustments were made to reduce the weight of real estate services and to distribute 'other services' across sectors to ensure that weights add to 100.

n. Maintenance and repair of equipment (not incl. transport equipment)	
o. Building-cleaning services	
p. Photographic services	
q. Packaging services	
r. Printing, publishing	
s. Convention services	
t. Other	
2. COMMUNICATION SERVICES	
A. Postal services	0.5
B. Courier services	0.2
C. Telecommunication services	3.8
a. Voice telephone services	
b. Packet-switched data transmission services	
c. Circuit-switched data transmission services	
d. Telex services	
e. Telegraph services	
f. Facsimile services	
g. Private leased circuit services	
h. Electronic mail	
i. Voice mail	
j. On-line information and data base retrieval	
k. electronic data interchange (EDI)	
l. enhanced/value-added facsimile services, incl. store and forward, store and retrieve	
m. code and protocol conversion	
n. on-line information and/or data processing (incl.transaction processing)	
o. other	
D. Audiovisual services	0.9
a. Motion picture and video tape production and distribution services	
b. Motion picture projection service	
c. Radio and television services	
d. Radio and television transmission services	
e. Sound recording	
f. Other	
E. Other	
3. CONSTRUCTION AND RELATED ENGINEERING SERVICES	
A. General construction work for buildings	3.5
B. General construction work for civil engineering	1.5
C. Installation and assembly work	1.0
D. Building completion and finishing work	1.0
E. Other	
4. DISTRIBUTION SERVICES	
A. Commission agents' services	0.7
B. Wholesale trade services	8.7
C. Retailing services	9.6
D. Franchising	5.0
E. Other	
5. EDUCATIONAL SERVICES	
A. Primary education services	1.5
B. Secondary education services	0.1
C. Higher education services	2.0
D. Adult education	1.0
E. Other education services	

6. ENVIRONMENTAL SERVICES
   A. Sewage services — 0.1
   B. Refuse disposal services — 0.5
   C. Sanitation and similar services — 0.1
   D. Other

7. FINANCIAL SERVICES
   A. All insurance and insurance-related services — 3.8
      a. Life, accident and health insurance services
      b. Non-life insurance services
      c. Reinsurance and retrocession
      d. Services auxiliary to insurance (including brokerage and agency services)
   B. Banking and other financial services (excluding insurance) — 6.0
      a. Acceptance of deposits and other repayable funds from the public
      b. Lending of all types, incl., inter alia, consumer credit, mortgage credit, factoring and financing of commercial transaction
      c. Financial leasing
      d. All payment and money transmission services
      e. Guarantees and commitments
      f. Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following:
         - money market instruments (cheques, bills, certificate of deposits, etc.)
         - foreign exchange
         - derivative products incl., but not limited to, futures and options
         - exchange rate and interest rate instruments, incl. products such as swaps, forward rate agreements, etc.
         - transferable securities
         - other negotiable instruments and financial assets, incl. bullion
      g. Participation in issues of all kinds of securities, incl. under-writing and placement as agent (whether publicly or privately) and provision of service related to such issues
      h. Money broking
      i. Asset management, such as cash or portfolio management, all forms of collective investment management, pension fund management, custodial depository and trust services
      j. Settlement and clearing services for financial assets, incl. securities, derivative products, and other negotiable instruments
      k. Advisory and other auxiliary financial services on all the activities listed in Article 1B of MTN.TNC/W/50, incl. credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy
      l. Provision and transfer of financial information, and financial data processing and related software by providers of other financial services
   C. Other

8. HEALTH RELATED AND SOCIAL SERVICES (other than those listed under 1.A.h-j.)
   A. Hospital services — 1.6
   B. Other Human Health Services — 2.3
   C. Social Services — 0.8
   D. Other

9. TOURISM AND TRAVEL RELATED SERVICES
   A. Hotels and restaurants (incl. catering) — 3.0
   B. Travel agencies and tour operators services — 0.3
   C. Tourist guides services — 0.1
   D. Other

10. RECREATIONAL, CULTURAL AND SPORTING SERVICES (other than audiovisual services)

A. Entertainment services (including theater, live bands and circus services)	0.5
B. News agency services	0.1
C. Libraries, archives, museums and other cultural services	0.1
D. Sporting and other recreational services	0.5
E. Other	
11. TRANSPORT SERVICES	
A. Maritime Transport Services	1.5
a. Passenger transportation	
b. Freight transportation	
c. Rental of vessels with crew	
d. Maintenance and repair of vessels	
e. Pushing and towing services	
f. Supporting services for maritime transport	
B. Internal Waterways Transport	0.2
a. Passenger transportation	
b. Freight transportation	
c. Rental of vessels with crew	
d. Maintenance and repair of vessels	
e. Pushing and towing services	
f. Supporting services for internal waterway transport	
C. Air Transport Services	1.5
a. Passenger transportation	
b. Freight transportation	
c. Rental of aircraft with crew	
d. Maintenance and repair of aircraft	
e. Supporting services for air transport	
D. Space Transport	0.1
E. Rail Transport Services	1.5
a. Passenger transportation	
b. Freight transportation	
c. Pushing and towing services	
d. Maintenance and repair of rail transport equipment	
e. Supporting services for rail transport services	
F. Road Transport Services	2.5
a. Passenger transportation	
b. Freight transportation	
c. Rental of commercial vehicles with operator	
d. Maintenance and repair of road transport equipment	
e. Supporting services for road transport services	
G. Pipeline Transport	0.5
a. Transportation of fuels	
b. Transportation of other goods	
H. Services auxiliary to all modes of transport	2.0
a. Cargo-handling services	
b. Storage and warehouse services	
c. Freight transport agency services	
d. Other	
I. Other Transport Services	
12. OTHER SERVICES NOT INCLUDED ELSEWHERE	0.4
Sum of weights:	**100.0**

Annex 2: GATS Schedules and 'Revealed' Relative Restrictiveness of Service Markets

The schedules of GATS Members can be used to generate information on the relative restrictiveness of policy regimes pertaining to service industries by assuming that the coverage of each country's schedule is an indicator of the policy stance that is pursued. The more liberal a country, the less constrained its government can be expected to be in binding the status quo in the GATS. The higher the coverage ratio of its schedule, the more liberal the country relative to other countries. A possible procedure then is to relate each country's coverage ratio to a benchmark 'guesstimate' of what the tariff equivalent of the most protectionist nation might be, to get a country-specific 'tariff equivalent'. For example, if a country's coverage ratio for a sector is 0.7--i.e., 70 percent of the sector is bound under GATS--this implies that 30 percent has been left off the table. One way of getting a 'tariff equivalent' would then be to set this at 0.3 times the benchmark guesstimate of the tariff equivalent for the most protectionist country--one that has not made any commitments for a sector.

The 'tariff equivalent' list for the 'most restrictive' country is completely arbitrary. In what follows, a value of 200 percent was chosen for sectors where access tends to be prohibited by most countries, and which do not appear in most schedules (maritime cabotage, air transport proper (as opposed to ground services), postal services, voice telecommunications, and life insurance). The rest varies between 20 and 50 percent (see the Annex Table).

As discussed further in the text, commitments can be broken down into three broad categories: 'None', implying no restrictions are applied on *either* market access or national treatment for a given mode of supply/sector; 'Unbound', meaning no commitment is made for a given mode of supply/sector; and 'Other', which in practice implies that bound restrictions are listed for a mode of supply/sector. For quantification purposes a value of '1' is allocated to all instances where 'None' is found; a zero in all instances of 'Unbound'; and 0.5 if specific bound restrictions are listed. For purposes of this exercise only data on market access restrictions are used. These weights are used to calculate coverage ratios for GATS Members.

To be useful for empirical work it is necessary to use a standard industrial classification, rather than the GATS list of sectors. The GATS list was therefore first concorded to the International Standard Industrial Classification (ISIC). The following value was then calculated: [1-x/y] for each ISIC item, where x is the weighted coverage for a sector for country and y is the total coverage possible for each category. Because some ISIC items are much more disaggregated in the GATS list than others, these totals vary widely. For example, the ISIC category 'business services' embodies 27 GATS subsectors. Given 4 modes of supply per subsector, the denominator for this item is 108. In other cases a GATS sector is equivalent to an ISIC sector, and the denominator is 4 (as there are four modes of supply). The resulting numbers range between 0 and 1. 0 is analogous to 'free access' (no restrictions), 1 is equivalent to 'no access' in the sense that no bindings are made for any mode of supply. The coverage ratios were then multiplied by the benchmark vector of tariffs. The Annex Table that follows reports the assumed benchmark 'tariff equivalents' for ISIC sectors, the sectoral weights used for aggregation to 2-digit and 1-digit ISIC, and the 'tariff equivalents' for selected GATS Members, i.e., [(1-x/y)*t], where t is the assumed benchmark tariff equivalent. The Table also reports results aggregated up to 1-digit ISIC, using the weights shown.

Guesstimates for sectors 5 and 6 tend to be low; those for 7 very high (as they should be, given the air transport cartel and the absence of offers in maritime and basic telecoms); and those for 8 and 9 in between. It should be re-emphasized that this is simply a method to get a handle on the *relative* restrictiveness of countries. The value of the numbers that emerge are a function of the 'reasonableness' of the assumed benchmark vector of tariff equivalents, and the correlation between offers made in the GATS context and a Member's actual policy stance. As can be seen from the Table, there are countries where the relative restrictiveness is expected to be high based on this methodology, but where the actual policy stance is relatively liberal. Cases in point are Hong Kong or Macau, traditional free traders. However, the fact remains that these economies did not bind the status quo, implying a non-zero probability that the regime may become substantially more restrictive in the future assuming it is indeed liberal now.

Clearly the methodology would be improved upon by incorporating information on the actual policy regimes that are in force in the various countries. But, this is precisely the problem: no data on this exists. The main issue then is how to come up with reasonable estimates of the benchmark tariff vector for the 'most restrictive' case. This is an area on which future research should focus. Given the absence of data on barriers to trade, the GATS-based coverage data might be used in CGE exercises to simulate the effects--and possible orders of magnitude--of liberalizing trade in services. Care must be taken, however, in allowing for a wide range of 'benchmark' tariff equivalents in such simulations.

Annex 2 Table

'Tariff equivalents' for 2-digit ISIC sectors, Selected GATS Members		Benchmark tariff eq.	1-digit weights	2-digit weights	australia	austria	canada	EU	finland	hong kong	japan	korea	mexico	new zealand
ISIC No.														
5	constr	40.0	1.0	1.0	12.0	5.0	6.0	10.0	19.0	32.0	5.0	16.0	24.0	5.0
61	mv repair	40.0	0.1	1.0	40.0	5.0	5.0	5.0	5.0	40.0	5.0	40.0	10.0	40.0
62	wholesale	40.0	0.4	1.0	5.0	5.0	10.0	12.5	5.0	40.0	5.0	27.5	25.0	5.0
63	retail	40.0	0.4	1.0	7.5	5.0	10.0	10.0	5.0	30.0	5.0	20.0	25.0	22.5
64	hot/rest	20.0	0.2	1.0	2.5	2.5	5.0	5.0	2.5	10.0	2.5	2.5	5.0	2.5
71	land transp	50.0	0.2	1.0	43.8	45.6	21.9	31.9	36.3	50.0	37.5	46.3	46.3	23.8
72A	maritime/waterway trans.	50.0	0.1	0.7	37.5	43.8	46.4	47.9	50.0	39.6	35.4	38.0	50.0	40.1
72B	maritime cabotage	200.0	0.1	0.3	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
73A	supporting air transport	50.0	0.0	0.2	32.5	32.5	35.0	32.5	32.5	50.0	33.8	42.5	45.0	48.8
73B	air trans. proper	200.0	0.1	0.8	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
74	aux transp	50.0	0.1	1.0	23.8	32.5	18.8	32.5	23.8	50.0	32.5	41.3	42.5	50.0
75A	post (incl. courier)	200.0	0.2	1.0	200.0	25.0	50.0	200.0	200.0	100.0	200.0	200.0	100.0	200.0
75B	basic tele	200.0	0.7	0.8	200.0	150.0	200.0	200.0	200.0	200.0	75.0	200.0	200.0	200.0
75C	va telecom	100.0	0.2	0.2	25.0	25.0	12.5	25.0	12.5	50.0	12.5	12.5	100.0	12.5
81+82	fin ser (excl. life insurance)	50.0	0.2	0.9	16.7	12.5	17.9	25.0	18.8	27.9	25.0	35.4	40.0	18.8
81+82	life insurance	200.0	0.0	0.2	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
83	real est	50.0	0.1	1.0	18.8	6.3	12.5	18.8	12.5	37.5	18.8	50.0	50.0	6.3
84	rental	40.0	0.1	1.0	12.0	12.0	5.0	17.0	13.0	28.0	19.0	21.0	20.0	5.0
85	computer	20.0	0.1	1.0	6.0	2.5	2.5	2.5	2.5	6.0	2.5	2.5	17.0	6.0
86A	R&D (social sciences)	20.0	0.0	0.2	14.2	2.5	14.2	15.0	14.2	20.0	14.2	17.5	5.0	20.0
86B	R&D (hard)	100.0	0.0	0.8	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89	business	40.0	0.4	1.0	12.2	8.3	17.2	13.3	11.3	30.9	17.0	18.7	25.6	28.3
92	sewage	50.0	0.1	1.0	17.2	6.3	6.3	6.3	31.3	50.0	6.3	26.6	50.0	50.0
93	education	50.0	0.1	1.0	23.8	23.8	50.0	20.0	50.0	50.0	22.5	50.0	20.0	23.8
94	health/soc	50.0	0.6	1.0	30.2	14.6	50.0	29.2	35.4	50.0	44.8	50.0	33.3	42.7
96	recr, culture	20.0	0.2	1.0	14.4	11.3	18.8	13.8	14.4	17.1	6.9	14.4	15.8	15.6
ISIC 5: Construction					12.0	5.0	6.0	10.0	19.0	32.0	5.0	16.0	24.0	5.0
ISIC 6: Wholesale and Retail Distribution					7.4	4.6	9.0	10.0	4.6	31.5	4.6	21.4	21.3	13.4
ISIC 7: Transport, Storage and Communications					183.4	98.7	117.7	182.0	181.0	149.8	142.0	184.9	152.3	181.5
ISIC 8: Business and Financial Services					24.8	20.1	25.9	27.2	23.8	39.0	28.9	36.3	40.9	30.5
ISIC 9: Social and Personal Services, incl. Health, Education, Entertainment					25.4	13.9	40.2	23.6	31.7	42.9	32.3	40.7	29.8	36.1

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Annex 2 Table

'Tariff equivalents' for 2-digit ISIC sectors, Selected GATS Members		norway	singapore	sweden	switzerland	turkey	usa	argentina	bahrain	bangladesh	brazil	cameroun	chile	china
ISIC No.														
5	constr	5.0	12.0	12.0	5.0	5.0	5.0	12.0	40.0	40.0	25.0	40.0	40.0	25.0
61	mv repair	40.0	40.0	20.0	5.0	40.0	5.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
62	wholesale	22.5	40.0	5.0	10.0	40.0	5.0	22.5	40.0	40.0	32.5	40.0	40.0	40.0
63	retail	5.0	40.0	25.0	7.5	40.0	5.0	5.0	40.0	40.0	20.0	40.0	40.0	40.0
64	hot/rest	2.5	2.5	2.5	5.0	2.5	2.5	2.5	20.0	10.0	12.5	12.5	2.5	10.0
71	land transp	28.8	50.0	38.8	25.0	36.3	27.5	50.0	50.0	50.0	47.5	50.0	50.0	47.5
72A	maritime/waterway trans.	50.0	39.1	50.0	32.8	35.4	50.0	50.0	50.0	50.0	50.0	50.0	50.0	43.2
72B	maritime cabotage	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
73A	supporting air transport	32.5	50.0	32.5	43.8	31.3	41.3	50.0	50.0	50.0	50.0	50.0	40.0	50.0
73B	air trans. proper	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
74	aux transp	50.0	50.0	50.0	15.0	50.0	42.5	50.0	50.0	50.0	42.5	50.0	50.0	27.5
75A	post (incl. courier)	50.0	75.0	200.0	200.0	-100.0	25.0	25.0	200.0	200.0	75.0	200.0	200.0	200.0
75B	basic tele	200.0	200.0	200.0	200.0	92.9	200.0	200.0	200.0	200.0	200.0	200.0	171.4	200.0
75C	va telecom	12.5	37.5	12.5	12.5	42.9	12.5	12.5	100.0	100.0	100.0	100.0	71.4	100.0
81+82	fin ser (excl. life insurance)	20.8	22.5	8.3	17.1	9.2	12.5	19.2	40.0	50.0	42.1	50.0	34.2	38.3
81+82	life insurance	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
83	real est	28.1	50.0	6.3	50.0	50.0	6.3	50.0	50.0	50.0	50.0	50.0	50.0	25.0
84	rental	14.0	40.0	14.0	15.0	40.0	19.0	40.0	40.0	40.0	40.0	40.0	34.0	40.0
85	computer	2.5	6.0	2.5	2.5	8.0	2.5	2.5	20.0	20.0	20.0	20.0	20.0	10.0
86A	R&D (social sciences)	14.2	14.2	14.2	2.5	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
86B	R&D (hard)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89	business	9.8	21.7	15.2	9.8	26.7	10.6	25.7	40.0	40.0	35.0	39.4	35.6	29.3
92	sewage	20.3	50.0	6.3	7.8	21.9	6.3	50.0	50.0	50.0	50.0	50.0	50.0	50.0
93	education	16.3	50.0	50.0	27.5	22.5	33.8	50.0	50.0	50.0	50.0	50.0	50.0	46.3
94	health/soc	28.1	36.5	31.3	41.7	44.8	43.8	50.0	50.0	50.0	50.0	50.0	50.0	47.9
96	recr, culture	15.6	14.6	13.1	14.2	18.5	3.3	17.1	20.0	20.0	20.0	19.4	17.1	20.0
ISIC 5: Construction		5.0	12.0	12.0	5.0	5.0	5.0	12.0	40.0	40.0	25.0	40.0	40.0	25.0
ISIC 6: Wholesale and Retail Distribution		13.4	34.4	13.4	8.0	34.4	4.6	13.4	37.0	35.5	24.9	35.9	34.4	35.5
ISIC 7: Transport, Storage and Communications		122.2	138.8	184.2	178.1	31.6	111.4	116.9	193.9	193.9	142.7	193.9	182.2	191.1
ISIC 8: Business and Financial Services		25.7	35.9	22.5	27.7	35.4	21.7	36.9	48.8	51.0	47.0	50.7	45.2	39.8
ISIC 9: Social and Personal Services, incl. Health, Education, Entertainment		24.0	33.7	26.9	32.3	35.9	31.7	42.9	43.6	43.6	43.6	43.4	42.9	42.0

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Annex 2 Table

'Tariff equivalents' for 2-digit ISIC sectors, Selected GATS Members		colombia	cote ivoire	czech rep	egypt	hungary	india	indonesia	israel	kenya	kuwait	macau	malaysia	morocco
ISIC No.														
5	constr	20.0	37.0	19.0	19.0	40.0	34.0	16.0	40.0	40.0	28.0	40.0	10.0	30.0
61	mv repair	40.0	5.0	25.0	40.0	5.0	40.0	40.0	40.0	15.0	40.0	40.0	40.0	40.0
62	wholesale	40.0	40.0	22.5	40.0	22.5	40.0	40.0	40.0	40.0	25.0	40.0	40.0	40.0
63	retail	40.0	40.0	10.0	40.0	5.0	40.0	40.0	40.0	40.0	32.5	40.0	40.0	40.0
64	hot/rest	7.5	2.5	2.5	2.5	2.5	10.0	5.0	5.0	2.5	12.5	10.0	5.0	2.5
71	land transp	50.0	39.4	45.0	47.5	36.3	50.0	50.0	50.0	35.6	50.0	50.0	50.0	45.0
72A	maritime/waterway trans.	50.0	42.7	37.5	42.2	42.7	50.0	43.8	50.0	50.0	50.0	50.0	37.5	50.0
72B	maritime cabotage	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
73A	supporting air transport	50.0	50.0	38.8	50.0	32.5	50.0	50.0	50.0	37.5	50.0	50.0	50.0	35.0
73B	air trans. proper	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
74	aux transp	50.0	50.0	50.0	50.0	41.3	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
75A	post (incl. courier)	200.0	200.0	75.0	200.0	200.0	200.0	200.0	-150.0	200.0	200.0	200.0	200.0	200.0
75B	basic tele	185.7	200.0	178.6	200.0	200.0	200.0	200.0	200.0	192.9	200.0	200.0	157.1	200.0
75C	va telecom	50.0	100.0	25.0	100.0	12.5	64.3	57.1	73.2	100.0	100.0	100.0	46.4	46.4
81+82	fin ser (excl. life insurance)	28.3	50.0	30.0	20.4	31.3	36.3	27.5	28.8	43.8	50.0	23.3	27.1	35.0
81+82	life insurance	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
83	real est	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
84	rental	35.0	40.0	30.0	40.0	15.0	40.0	40.0	40.0	40.0	40.0	36.0	22.0	40.0
85	computer	10.0	20.0	2.5	20.0	6.0	16.0	16.0	6.0	20.0	14.0	20.0	11.0	18.5
86A	R&D (social sciences)	20.0	20.0	14.2	20.0	2.5	18.3	16.7	20.0	20.0	12.5	20.0	15.0	20.0
86B	R&D (hard)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89	business	35.6	38.3	20.9	40.0	9.4	38.9	34.1	25.4	40.0	29.4	40.0	21.3	38.7
92	sewage	50.0	50.0	26.6	50.0	28.1	50.0	50.0	6.3	50.0	35.9	50.0	50.0	31.3
93	education	50.0	50.0	12.5	50.0	20.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0	50.0
94	health/soc	42.7	50.0	41.7	50.0	28.1	45.8	50.0	50.0	50.0	40.6	50.0	37.5	50.0
96	recr, culture	18.5	17.1	17.9	19.0	16.5	18.8	18.8	17.3	14.6	17.5	19.4	13.8	18.1
ISIC 5: Construction		20.0	37.0	19.0	19.0	40.0	34.0	16.0	40.0	40.0	28.0	40.0	10.0	30.0
ISIC 6: Wholesale and Retail Distribution		35.1	32.6	14.6	34.4	11.6	35.5	34.8	34.8	33.1	26.9	35.5	34.8	34.4
ISIC 7: Transport, Storage and Communications		185.4	191.7	129.6	193.3	182.7	191.1	190.4	51.8	188.4	193.9	193.9	175.8	188.2
ISIC 8: Business and Financial Services		43.4	50.3	36.5	44.5	30.9	47.2	43.1	39.0	49.6	45.9	44.9	36.1	47.0
ISIC 9: Social and Personal Services, incl. Health, Education, Entertainment		38.6	42.9	33.4	43.3	25.0	40.6	43.3	39.9	42.4	36.0	43.4	34.2	41.8

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Annex 2 Table

'Tariff equivalents' for 2-digit ISIC sectors, Selected GATS Members		pakistan	peru	phippines	poland	south afr.	sri lanka	tanzania	thailand	trinidad	tunisia	uruguay	venezuela	zimbabwe
ISIC No.														
5	constr	34.0	40.0	40.0	5.0	12.0	40.0	40.0	28.0	40.0	40.0	40.0	35.0	40.0
61	mv repair	40.0	40.0	0.0	40.0	5.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
62	wholesale	40.0	32.5	40.0	25.0	22.5	40.0	40.0	32.5	40.0	40.0	40.0	40.0	40.0
63	retail	40.0	32.5	40.0	27.5	5.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0	40.0
64	hot/rest	7.5	15.0	5.0	2.5	7.5	10.0	5.0	10.0	0.0	2.5	2.5	2.5	2.5
71	land transp	50.0	50.0	21.3	50.0	41.9	50.0	50.0	40.0	50.0	50.0	50.0	50.0	50.0
72A	maritime/waterway trans.	50.0	48.4	39.1	50.0	50.0	50.0	50.0	39.1	42.2	50.0	50.0	47.4	50.0
72B	maritime cabotage	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
73A	supporting air transport	50.0	50.0	31.3	32.5	50.0	50.0	50.0	41.3	50.0	50.0	50.0	50.0	50.0
73B	air trans. proper	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
74	aux transp	50.0	50.0	20.0	50.0	50.0	50.0	50.0	45.0	50.0	50.0	41.3	32.5	50.0
75A	post (incl. courier)	200.0	200.0	25.0	25.0	25.0	200.0	200.0	200.0	200.0	200.0	75.0	75.0	200.0
75B	basic tele	200.0	200.0	200.0	185.7	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	153.6
75C	va telecom	89.3	62.5	46.4	64.3	50.0	100.0	100.0	82.1	100.0	100.0	100.0	100.0	12.5
81+82	fin ser (excl. life insurance)	40.8	47.5	13.8	39.2	38.8	50.0	50.0	35.4	47.1	34.6	42.5	32.9	35.0
81+82	life insurance	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
83	real est	50.0	50.0	50.0	50.0	6.3	50.0	50.0	50.0	50.0	50.0	6.3	50.0	50.0
84	rental	40.0	37.0	26.0	40.0	12.0	40.0	40.0	36.0	40.0	40.0	19.0	40.0	40.0
85	computer	11.0	20.0	20.0	6.0	2.5	20.0	20.0	12.0	12.0	20.0	2.5	5.0	20.0
86A	R&D (social sciences)	15.8	20.0	20.0	20.0	20.0	20.0	20.0	20.0	6.7	20.0	20.0	20.0	20.0
86B	R&D (hard)	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
89	business	35.4	36.5	38.7	28.3	15.0	40.0	40.0	29.1	37.0	40.0	33.5	32.2	40.0
92	sewage	50.0	50.0	50.0	39.1	6.3	50.0	50.0	25.0	50.0	50.0	50.0	50.0	50.0
93	education	50.0	50.0	50.0	25.0	50.0	50.0	50.0	38.8	42.5	50.0	50.0	50.0	50.0
94	health/soc	37.5	50.0	50.0	30.2	28.1	50.0	50.0	50.0	34.4	50.0	50.0	50.0	50.0
96	recr. culture	19.4	18.1	19.0	19.0	17.1	19.2	20.0	16.7	16.0	19.6	15.6	18.5	17.5
ISIC 5: Construction		34.0	40.0	40.0	5.0	12.0	40.0	40.0	28.0	40.0	40.0	40.0	35.0	40.0
ISIC 6: Wholesale and Retail Distribution		35.1	30.3	32.8	23.4	12.4	35.5	34.8	32.5	34.0	34.4	34.4	34.4	34.4
ISIC 7: Transport, Storage and Communications		193.1	190.9	110.2	116.0	118.3	193.9	193.9	189.6	193.8	193.9	143.1	142.1	172.1
ISIC 8: Business and Financial Services		46.4	48.7	41.7	42.6	29.1	51.0	51.0	42.2	48.5	47.6	38.6	42.9	47.7
ISIC 9: Social and Personal Services, incl. Health, Education, Entertainment		35.4	43.2	43.3	28.1	25.8	43.4	43.6	40.3	32.1	43.5	42.6	43.3	43.0

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Annex 3: GATS Members: Number of Sectors Scheduled
(Maximum number=620, i.e., 155 activities times 4 modes of supply)

Developing Countries

Algeria	4
Antigua & Barbuda	68
Antilles (Netherlands)	144
Argentina	208
Aruba	140
Bahrain	16
Bangladesh	4
Barbados	24
Belize	8
Benin	44
Bolivia	24
Brazil	156
Brunei	76
Burkina Faso	8
Cameroon	12
Chile	140
China	196
Colombia	164
Congo	16
Costa Rica	52
Cote D'Ivoire	56
Cuba	120
Cyprus	36
Czech Republic	304
Dominica	20
Dominican Republic	264
El Salvador	92
Egypt	104
Fiji Islands	4
Gabon	44
Ghana	100
Grenada	20
Guatemala	40
Guyana	72
Honduras	64
Hungary	336
India	132
Indonesia	140
Israel	180
Jamaica	128
Kenya	84
Kuwait	176
Macao	76
Madagascar	8
Malaysia	256
Malta	28
Mauritius	43
Morocco	144
Mozambique	48
Myanmar	12
Namibia	12
New Caledonia	24
Nicaragua	196
Niger	20
Nigeria	96
Pakistan	108
Paraguay	36
Peru	96
Philippines	160
Poland	212
Romania	176
St. Lucia	32
St. Vincent & the Grenadines	32
Senegal	104
Slovak Republic	308
South Africa	288
Sri Lanka	8
Suriname	16
Swaziland	36
Tanzania	4
Thailand	260
Trinidad & Tobago	68
Tunisia	52
Uganda	8
Uruguay	96
Venezuela	156
Zambia	64
Zimbabwe	72

'HIC' Members

Australia	360
Austria	412
Canada	352
European Union	392
Finland	328
Hong Kong	200
Iceland	372
Japan	408
Korea	311
Mexico	252
New Zealand	276
Norway	360
Singapore	232
Sweden	320
Switzerland	400
Liechtenstein	312
Turkey	276
USA	384

Annex 4: Mode of Supply Weights

Mode	Service Sector	Number of subsectors	Sector weight in GDP	Adjustment for excluded sub sectors	Mode of supply weight
	1. Business services				
1	A. Prof	n=11	8	1	0.1
2			8	1	0.1
3			8	1	0.4
4			8	1	0.4
1	B. Computer	n=5	2	1	0.3
2			2	1	0.1
3			2	1	0.2
4			2	1	0.4
1	C. R&D	n=3	2	0.1	0.3
2			2	0.1	0.1
3			2	0.1	0.2
4			2	0.1	0.4
1	D. Real Est	n=2	5	1	0
2			5	1	0
3			5	1	0.9
4			5	1	0.1
1	E. Rental	n=5	2	0.5	0.2
2			2	0.5	0.2
3			2	0.5	0.5
4			2	0.5	0.1
1	F. Other Business	n=20	10	1	0.1
2			10	1	0.1
3			10	1	0.4
4			10	1	0.4
	2. Communication				
1	A. Post	n=1	0.5	1	0.2
2			0.5	1	0
3			0.5	1	0.8
4			0.5	1	0
1	B. Courier	n=1	0.2	1	0.4
2			0.2	1	0
3			0.2	1	0.4
4			0.2	1	0.2
1	C. Telecom	n=14	3.8	1	0.4
2			3.8	1	0
3			3.8	1	0.5
4			3.8	1	0.1
1	D. Audio/Visual	n=6	0.9	1	0.3
2			0.9	1	0.1
3			0.9	1	0.4
4			0.9	1	0.2
	3. Construction			1	
1	A. Building	n=1	3.5	1	0
2			3.5	1	0
3			3.5	1	0.8
4			3.5	1	0.2
1	B. Civil Eng	n=1	1.5	1	0
2			1.5	1	0
3			1.5	1	0.8
4			1.5	1	0.2

Annex 4: Mode of Supply Weights

Mode	Service Sector		Number of subsectors	Sector weight in GDP	Adjustment for excluded sub sectors	Mode of supply weight
1		C. Install	n=1	1	1	0
2				1	1	0
3				1	1	0.8
4				1	1	0.2
1		D. Completion	n=1	1	1	0
2				1	1	0
3				1	1	0.8
4				1	1	0.2
	4. Distribution					
1		A. Agents	n=1	0.7	1	0.2
2				0.7	1	0.1
3				0.7	1	0.6
4				0.7	1	0.1
1		B. Wholesale	n=1	8.7	1	0.2
2				8.7	1	0
3				8.7	1	0.7
4				8.7	1	0.1
1		C. Retail	n=1	9.6	1	0.1
2				9.6	1	0.1
3				9.6	1	0.7
4				9.6	1	0.1
1		D. Franchising	n=1	5	1	0.5
2				5	1	0
3				5	1	0.5
4				5	1	0
	5. Education					
1		A.Primary	n=1	1.5	0.1	0
2				1.5	0.1	0.2
3				1.5	0.1	0.8
4				1.5	0.1	0
1		B. Secondary	n=1	0.1	0.1	0
2				0.1	0.1	0.2
3				0.1	0.1	0.8
4				0.1	0.1	0
1		C. Tertiary	n=1	2	1	0
2				2	1	0.3
3				2	1	0.6
4				2	1	0.1
1		D. Adult	n=1	1	1	0.1
2				1	1	0.2
3				1	1	0.5
4				1	1	0.2
	6. Environmental					
1		A. Sewage	n=1	0.1	1	0
2				0.1	1	0
3				0.1	1	1
4				0.1	1	0
1		B. Refuse	n=1	0.5	1	0.1
2				0.5	1	0
3				0.5	1	0.8
4				0.5	1	0.1
1		C. Sanitation	n=1	0.1	1	0.1
2				0.1	1	0
3				0.1	1	0.8
4				0.1	1	0.1

Annex 4: Mode of Supply Weights

Mode	Service Sector		Number of subsectors	Sector weight in GDP	Adjustment for excluded sub sectors	Mode of supply weight
	7. Financial					
1		A. Insurance	n=4	3.8	0.5	0.2
2				3.8	0.5	0
3				3.8	0.5	0.7
4				3.8	0.5	0.1
1		B. Banking	n=12	6	1	0.2
2				6	1	0.1
3				6	1	0.6
4				6	1	0.1
	8. Health, etc					
1		A. Hospital	n=1	1.6	1	0
2				1.6	1	0.1
3				1.6	1	0.8
4				1.6	1	0.1
1		B. Other human	n=1	2.3	1	0
2				2.3	1	0.1
3				2.3	1	0.8
4				2.3	1	0.1
1		C. Social		0.8	1	0.1
2			n=1	0.8	1	0.1
3				0.8	1	0.7
4				0.8	1	0.1
	9.Tourism					
1		A. Hotels/Rest.	n=1	3	1	0
2				3	1	0.1
3				3	1	0.8
4				3	1	0.1
1		B. Travel Agencies	n=1	0.3	1	0
2				0.3	1	0.1
3				0.3	1	0.8
4				0.3	1	0.1
1		C. Guides	n=1	0.1	1	0
2				0.1	1	0.1
3				0.1	1	0.7
4				0.1	1	0.2
	10. Recreation					
1		A. Entertainment	n=1	0.5	1	0.2
2				0.5	1	0.1
3				0.5	1	0.1
4				0.5	1	0.6
1		B. News Agrency	n=1	0.1	1	0.2
2				0.1	1	0.1
3				0.1	1	0.35
4				0.1	1	0.35
1		C. Libraries	n=1	0.1	1	0
2				0.1	1	0.1
3				0.1	1	0.8
4				0.1	1	0.1
1		D. Sports	n=1	0.5	1	0
2				0.5	1	0.1
3				0.5	1	0.2
4				0.5	1	0.7
	11. Transport					
1		A. Maritime	n=6	1.5	0.15	0.1
2				1.5	0.15	0.1
3				1.5	0.15	0.7
4				1.5	0.15	0.1

Annex 4: Mode of Supply Weights

Mode	Service Sector		Number of subsectors	Sector weight in GDP	Adjustment for excluded sub sectors	Mode of supply weight
		B. Waterway	n=6	0.2	1	0.1
2				0.2	1	0.1
3				0.2	1	0.7
4				0.2	1	0.1
1		C. Air	n=5	1.5	0.05	0.3
2				1.5	0.05	0.2
3				1.5	0.05	0.4
4				1.5	0.05	0.1
1		D. Space	n=1	0.1	1	0.3
2				0.1	1	0
3				0.1	1	0.4
4				0.1	1	0.3
1		E. Rail	n=5	1.5	1	0.1
2				1.5	1	0
3				1.5	1	0.8
4				1.5	1	0.1
1		F.Road	n=5	2.5	0.1	0.4
2				2.5	0.1	0.1
3				2.5	0.1	0.4
4				2.5	0.1	0.1
1		G. Pipe	n=2	0.5	0.1	0.2
2				0.5	0.1	0
3				0.5	0.1	0.8
4				0.5	0.1	0
1		H. Auxiliary	n=5	2	1	0.2
2				2	1	0.1
3				2	1	0.6
4				2	1	0.1
1	**12. Other nes**		n=1	0.4	1	0.2
2				0.4	1	0.1
3				0.4	1	0.5
4				0.4	1	0.2

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